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MANAGING THE BACKLOG OF MAINTENANCE AND REPAIR IN THE UNITED STATES NAVY

BY

LT JOEL E. SINN, CEC, USNR

A REPORT PRESENTED TO THE GRADUATE COMMITTEE
OF THE DEPARTMENT OF CIVIL ENGINEERING IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF ENGINEERING

UNIVERSITY OF FLORIDA

FALL 1984

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TO KAREN

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

One facet of civil engineering that often receives little attention is the area of facilities maintenance. A properly planned and administered maintenance program can mean substantial dollar savings in the life cycle of a facility.

For ease of identification, the term "facilities" in this report shall be defined as any structure including roadways, utility lines, fences, buildings, etc., that support the overall mission of a given activity. Other terms used in this report are defined in section 1.5 of this introductory chapter.

This report will focus on the general procedures and complexities of managing the maintenance and repair of facilities within the U.S. Navy. Maintenance and repair is considered one of four primary engineering functions of a Real Property Maintenance Activity (RPMA) within the Department of Defense and the U.S. Navy.

1.2 Background

Maintenance of Real Property (MRP) is of particular concern within the Navy for many reasons. The Navy's

capability to perform current missions and to perform missions in the event of contingencies or mobilization is directly related to the condition of Navy facilities. Deferral of maintenance and repair is an attractive alternative in an era of extreme pressure on resources. However, the effects of deferral are cumulative. The results become apparent in later years in the form of severe deterioration and greatly increased costs to correct the deficiencies. The amount of allocation of resources to this area is also a major determinant of shore facility appearance, which the Chief of Naval Operations (CNO) considers closely related to the overall smartness and pride associated with an efficient military service (9:1).

The management concept for a RPMA recognizes the interrelationship of it's four primary functions (see definitions, section 1.5, p. 10). All four of these functions must be performed. Increases in funding allocations to one reduces allocations available for others. Because utilities operations and other engineering support function reductions would have an immediate adverse impact, these functions are generally funded at acceptable levels. The shortfalls occur in the function of maintenance and repair, which is often considered deferrable because there are no immediately apparent consequences. Minor construction is a relatively small

part of the RPMA program. For this reason, the focus of management effort should be primarily upon maintenance and repair. However, minor construction generally has more visible affects at the activity level and is sometimes difficult to control.

Allocation of resources to the function of maintenance and repair should be influenced by the condition of Navy real property and its potential for impact on Navy readiness. During the preparation of each annual Program Objective Memorandum (POM) for Congress, the CNO makes basic resource allocation decisions including the resources to be committed to RPMA functions. This requires the presentation of facts and judgments to senior decision makers in a form that assists them in understanding the long term significance of these decisions. A single assessment of condition for the entire naval shore establishment would be so broad, it would be meaningless. A breakdown is made into facilities with related contribution to missions. This is achieved by utilizing investment categories (IC). During the preparation of each POM, profiles are prepared which present for each IC the relevant impact on readiness at the level supported and the program objectives, as appropriate. Each profile identifies the resources required to achieve the proposed program objectives over a five year period. Program

objectives are also the means by which the CNO provides guidance to subordinate Navy commanders, and establishes a frame of reference for appraisal of Navy progress against approved plans (9:2).

Implementation has involved increased emphasis on the scheduled inspection of facilities at the activity level. Without current information on the condition of facilities this approach would have no value. Each year Annual Inspection Summaries (AIS) are submitted by shore activity commanding officers to their major claimants who analyze these inputs and provide the CNO with an overall assessment of the condition of their facilities by IC.

The AIS is the cornerstone of the entire RPMA program. It establishes activity credibility with all higher authority. It is the basis on which the Navy justifies the level of the program requested, both during the budget process and into the POM cycle. It is the most frequently and critically audited of facilities management indicators. It forms the basis for the development of BMAR, a highly visible term. BMAR is the term which Congress constantly refers to in appropriations for RPMA.

1.3 Organization

The organizational structure within the Navy is illustrated in Figure 1-1. This figure is in simplistic

form to provide a clear picture of the basic structure and should not be considered to be anything more than that. The actual chain of command varies by activity and includes other factors not considered in the context of this report. As shown, there are two basic chain of commands when dealing with MRP. The operational chain is the true chain of command. The technical chain provides only technical advice. The technical chain includes the Naval Facilities Engineering Command (NAVFAC), and Engineering Field Divisions (EFD's) of NAVFAC. This chain comprises one facet of the Navy Civil Engineer Corps (CEC). The technical chain provides technical assistance and guidance for activities and major claimants in the area of MRP and other engineering type services.

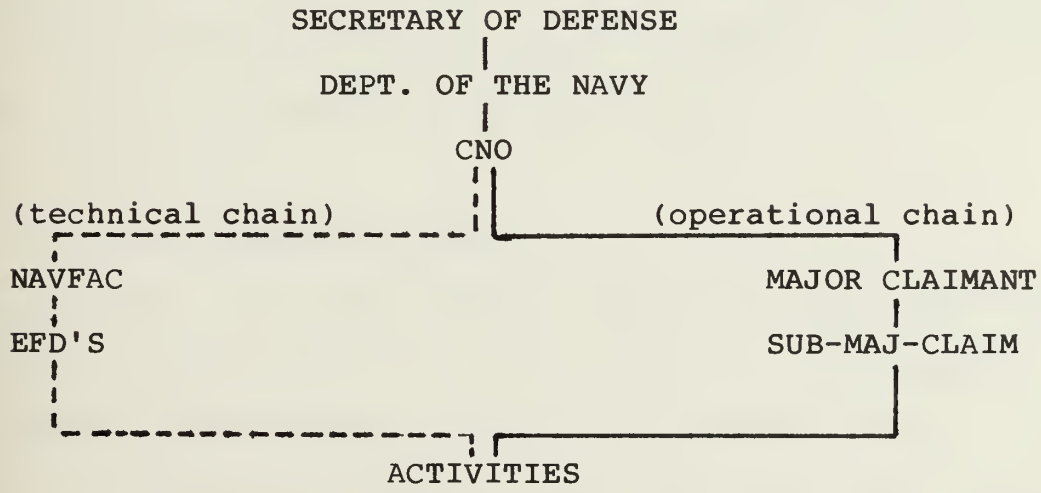
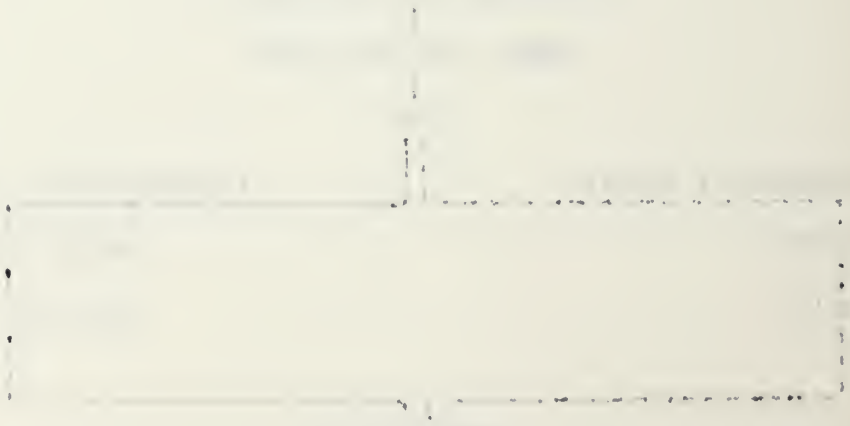


FIG. 1-1



The operational chain is the chain that operational decisions and authority flows through. MRP budgets and project approvals fall within the operational chain. The organization is primarily decentralized. Each activity has a Commanding Officer (CO) or an Officer in Charge. A vast amount of authority and decision making is delegated to the activity level. In the MRP area however, there is a centralized decision making process. This will be discussed in chapter five.

1.4 Deterioration of Facilities

One of the major problems facing the Navy is the deterioration of the physical condition of the shore establishment. Deterioration has caused a threat to readiness in many areas. Many factors come into play as to why the deterioration has continued to advance. The cause is most likely a combination of many factors.

1.4.1 Aging Inventory

Much of the Navy's facility inventory was constructed during World War II, and is of semi-permanent or temporary construction. Long term maintenance was of no concern during construction. The facilities were never intended to economically serve the Navy for more than a few years (12:ix).

Over the years, replacement dollars have not kept up with the requirements. Therefore the majority of the Navy's operational facilities are these temporary structures. The problem is compounded by technological advances. Many facilities are being used for purposes other than what they were constructed for.

There is evidence which suggests that 25 to 40 per cent of the Navy's plant assets have exceeded their "useful" life. This is to say that these facilities have long since exceeded their economic life, and many have exceeded their "useful" life at this point in time. A look into the future reveals that programmed construction is insufficient in quantity and improperly allocated to relieve this condition, so the number of facilities which exceed their useful life can only increase. The most reasonable alternative is to protect the Navy's existing plant assets in hopes of increasing their useful life (16:2).

1.4.2 Past Funding Levels

Following the Viet Nam Conflict, severe budget cuts were experienced DOD wide. This included cuts in MRP funds. The budget cuts required activities to cut back on services. Continuous inspection programs were cut back significantly, primarily because they had minimal short

term adverse impact. The continuous inspections are used to generate the AIS. Decreased inspections generated smaller backlog on the AIS. This in turn resulted in a further decrease in MRP budgets. As a result of this and other factors, the Navy was unable to adequately defend the RMPA budget request at DOD budget hearings in 1976. This caused the Navy's fiscal year 1978 RMPA funding to be reduced by $43.5 million (3:1).

In the mid-1970's, the House Appropriations Committee, along with the OMB, raised serious questions as to the validity of BMAR. Dollar figures alone were no longer sufficient evidence that a requirement truly existed for the budget year (16:2). This caused serious problems at the activity level. For example: in 1975, a southern California Naval Air Station spent more money repairing damage to jet engines from foreign objects from the runway, than it would have cost to repair the runway that was causing the problem. Budgeting reductions in MRP precluded fixing the runway (15:1,3).

Funding for MRP began increasing in the late 1970's. Figure 1-2 shows the actual MRP level funded and the established MRP floor (see definitions), as well as the existing level of MRP backlog since 1979. Figure 1-3 shows the minimum POM requirement (see definitions and section 1.2) along with the projected BMAR for FY82 through FY86.

MRP FUNDING

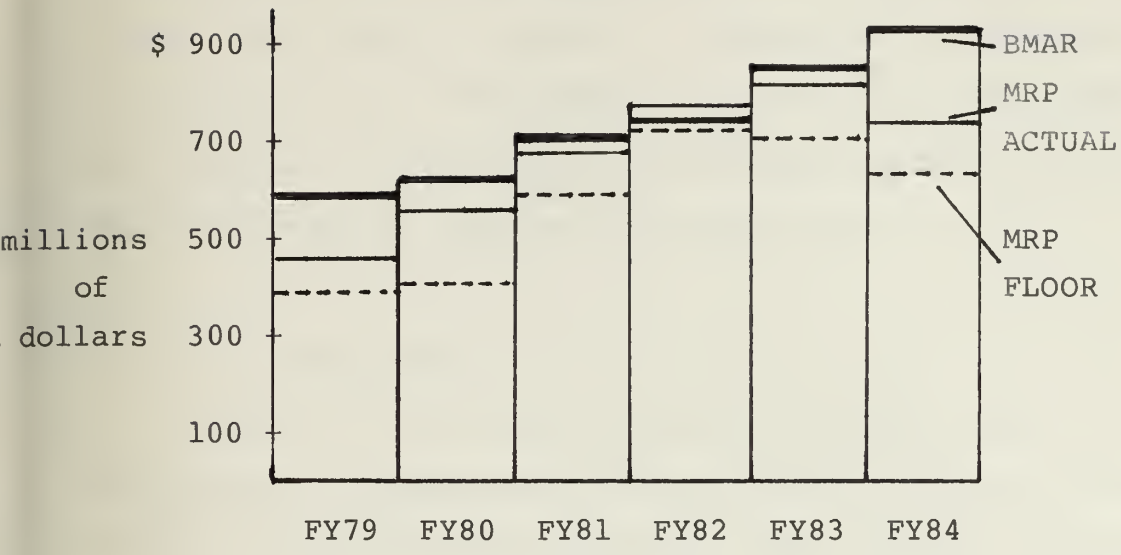


FIGURE 1-2

MINIMUM POM REQUIREMENTS

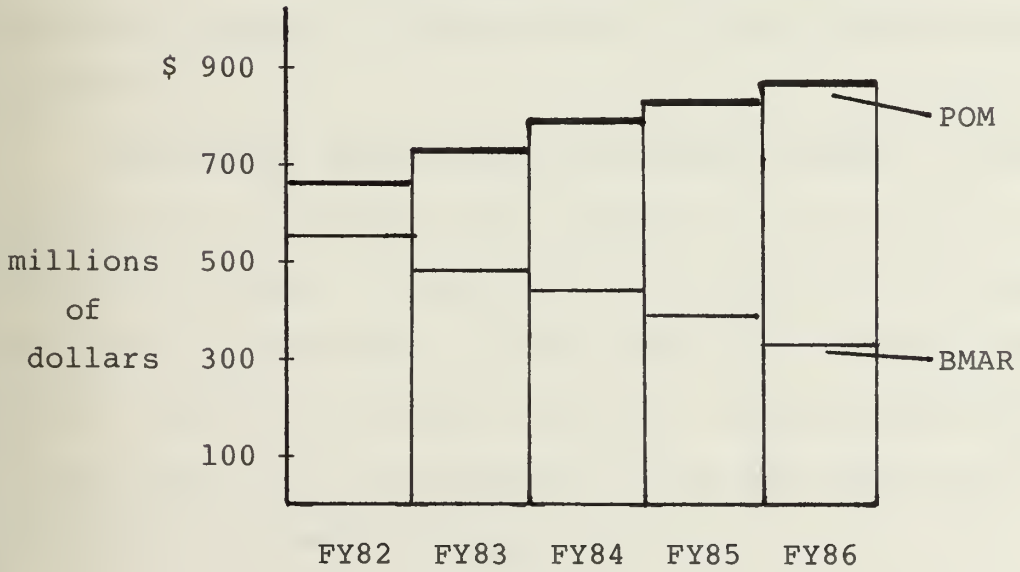


FIGURE 1-3

This increase is credited largely to RADM Jortberg's efforts in the 1976-1978 time frame. During this time, while acting as CNO(OP-44), RADM Jortberg revitalized the continuous inspection program, initiated ADP support to the AIS and convinced Congress that there was a substantial problem with MRP (10:1).

1.5 Definitions

A brief list of definitions is provided here to enable the reader to become familiar with some terms that are used within the Department of Defense (DOD) and the U.S. Navy.

Annual Inspection Summary (AIS). The AIS is an annual report, prepared by the activity, that summarizes the MRP deficiencies at fiscal year end. The report lists all unfunded facility deficiencies with current cost estimates and an indication of deferability. (Also see BMAR and NMAR definitions).

Backlog of Maintenance and Repair (BMAR). BMAR is a Department of Defense term defined as the end of fiscal year measurement of maintenance and repair work remaining as a firm requirement of the installation work plans but which lack of resources prohibit accomplishment in that fiscal year. For the purpose of internal Navy use, BMAR is equivalent to NMAR backlog.

Deferable Maintenance and Repair Backlog. The deferable maintenance and repair backlog for a given fiscal year is the estimated dollar value of maintenance and repair deficiencies of a deferable nature (see nondeferability) for which corrective action is not "formally authorized" at the end of the fiscal year (September 30).

Maintenance. The recurring day-to-day, periodic, or scheduled work (not attributable to Preventive Maintenance Inspections) required to preserve a real property facility in such a condition that it may be effectively utilized for its designated purpose is defined as maintenance. The term includes work undertaken to prevent damage to a facility that otherwise would be more costly to repair.

Maintenance of Real Property (MRP). A term that is commonly used within DOD and the Congress, and which includes maintenance, repair, and minor construction. The maintenance floor imposed by the Congress relates to the combination of these categories.

MRP Floor. A congressional limitation that sets the minimum of funds which is available only for maintenance of real property.

Narrative Assessment. A summarization by the claimants of the condition of the facilities under their cognizance and of the mission impact of that condition.

Nondeferability. When the nature of a maintenance or repair deficiency is such that corrective action should be initiated during the given fiscal year, then the deficiency is considered nondeferable beyond the end of that year. It is CNO policy that a maintenance and repair deficiency is "nondeferable in nature" only when it satisfies one (or more) of six criteria. The criteria relate to cost, mission, safety, prudent, environmental, and quality of life concerns. (The criteria are long and rather complex so they are not included).

Nondeferable Maintenance and Repair Backlog (NMAR). NMAR backlog for a given fiscal year is the estimated dollar value of maintenance and repair deficiencies of a nondeferable nature (see nondeferability), for which corrective action is not formally authorized at the end of the fiscal year (September 30). Corrective action is considered "formally authorized" only when there exists a signed specific job order, a signed contract, or other signed work authorization document.

Program Objective Memorandum (POM). A five year budget projection for all areas of the Navy including MRP. The POM is prepared in three budget requirements; minimum, basic, and enhanced. The POM lists the budget year plus the next four years beyond. The POM includes established program goals that the requested budget should accomplish.

Real Property Maintenance Activities (RPMA). A Department of Defense term used to describe the following management and engineering functions involved in shore facility maintenance and operation:

(1) Maintenance and repair

(2) Utilities operations

(3) Other engineering support

(4) Minor construction

Repair. The restoration of a real property facility to such a condition that it may be effectively utilized for its designated purposes by overhaul, reprocessing, or replacement of constituent parts of materials that have deteriorated by action of the elements or usage and have not been corrected through maintenance.

Total Maintenance and Repair Backlog. The total maintenance and repair backlog for a given fiscal year is the estimated dollar value of all maintenance and repair deficiencies for which corrective action is not formally authorized at the end of the fiscal year. It represents a point in time measurement of the condition of all property. It is the sum of the nondeferable maintenance and repair backlog and deferable maintenance and repair backlog.

CHAPTER TWO

OVERVIEW

2.1 View from the Top

The real property maintenance activity area has been of special interest to the Congress, the Secretary of Defense, and the CNO for many years. Operation and Maintenance, Navy (O/MN), and RPMA budgets are also subject to critical reviews by the Office of the Secretary of Defense (OSD). Since 1963, Congress has established an annual maintenance floor to assure that at least the minimum requirement for MRP is funded.

During the preparation of the annual POM, CNO prepares a comprehensive review of the requirements for RPMA resources in the O/MN appropriation. Profiles are prepared that include an assessment of the condition of the facilities, a statement of the potential for impact on Navy readiness, recommended CNO program objectives, and identification of the resources required to achieve the proposed objectives (9:2).

As discussed in chapter one, Congress has been concerned with the ever growing backlog. Pressure from Congress has extended down through SECNAV and CNO to NAVFAC. As overseer of the overall MRP program and consolidator/receiver of the activity generated reports for

the entire Navy, NAVFAC is greatly concerned with the validity of these reports.

The activity has the greatest control over the content of the reports. NAVFAC is held accountable for their content and must use the reports to justify total Navy budget requests to Congress. While NAVFAC has great control over how the overall system will operate, they are physically and administratively separated from those who actually operate the system, the activity. NAVFAC is genuinely concerned with improving the system. In general, most of those who oversee the system at this level feel that, while the system is not perfect, it provides an excellent base, requiring only minor improvements.

Opinions of what improvements should be made vary from individual to individual. The concensus is that improvements to make the system more valid must come at the activity level. Inspection procedures, control over MRP funding, and accountability of the activity commanding officer are three prime areas of concern at the Washington level. There is a desire to put enough emphasis on the MRP program to generate the personal interest of the activity's CO and to put a genuine effort into providing valid data and proper funding (ensure MRP funds are applied to the backlog).

2.2 View from the Major Claimant

The major claimant falls between the CNO and the activies on the operational chain of command. In some situations there are sub-major claimants between the major claimants and the activities. Activities receive their annual budget allocations from the major claimants.

These major claimants are responsible for the overall coordination, review, validation, and consolidation of the activity generated reports. The consolidated reports are then forwarded to the CNO. It seems the existing system poses little problems for the major claimants. The biggest problems are in late or improperly submitted reports.

The sheer magnitude of volume of deficiencies (hundreds of millions of dollars) precludes the major claimants from dealing with individual deficiencies. The primary concern at this level is with total dollar amounts in various categories. These amounts are sometimes used to determine budget allocations in future years.

For example, Commander Naval Logistics Command U.S. Pacific Fleet (COMNAVLOGPAC) is a sub-major claimant for all naval stations on the West coast and Pacific area (including Japan, Hawaii, Philipines, etc.) and for Pacific area naval magazines. COMNAVLOGPAC totals the backlog of all their activities and uses each activity's percentage of the total backlog as a guide for budget allocation in MRP.

Major claimants are basically a stepping stone in the link from activities to CNO and have only a small amount of control over the system as a whole. In general major claimants favor long term plans and will work with the activities to attempt to provide adequate funding consistent with these plans. These long term plans provide the means for the major claimants to justify their budget requests to CNO.

2.3 View from the Activity

Commanders, Commanding Officers, and Officers-in-Charge of Shore Activities having plant account custody of land or facilities are responsible to the CNO through their Immediate Superior in Command (ISIC) for prudent land and facilities planning, for identifying facility-related resource requirements, for the material condition, safety, and appearance of assigned land and facilities, for proper and economic utilization of assets, and for the efficient and effective application of manpower and funds under their own control (2:I-3).

The individual activities throughout the Navy have key action in managing the backlog. The activities have primary input in identifying the backlog and are responsible for execution of the backlog reduction, as discussed in chapter one.

Activities are assisted in this by a public works department, a public works center or a public works lead activity. In essence, every RPMA in the U.S. Navy has access to a CEC officer to manage their MRP programs.

A typical medium-sized activity will often have a backlog that exceeds eight to ten times the annual station budget available in MRP for reducing the backlog. In fiscal year 1983, the Naval Magazine at Lualualei, Hawaii had a backlog of nearly $12 million and roughly $1.25 million available in MRP to be applied to reducing it.

The deficiencies identified in the backlog normally average about $1000-1500 per line item. As one can imagine, trying to manage a backlog towards effective reduction becomes extremely difficult when dealing with such a large number of small deficiencies.

Most activities view the current system in a different light than those at higher echelons. Many of the hands-on-managers desire to use the system in ways other than what was originally intended. The AIS is basically a by-product of the continuous inspection program. The inspection itself is considered the most important aspect of the program. The existing system provides an excellent base of information, but it is not used as or intended to be a management tool. This is primarily due to the complications stated above. The onset of micro and mini

computers, (as will be discussed in chapter three), will make the tasks at the activity level easier.

CHAPTER THREE

COMPUTER APPLICATIONS

3.1 Public Works Center Management Systems (PWCMS) / Automated Data System (ADS)

As a result of the de-emphasis in facilities inspection due to budget cuts in the early 70's, RADM Jortberg (OP-44 CNO) identified the need to improve the management control over inspection and update the management process. The initial goal in early 1978 was to provide a program that could utilize existing management information system ADP hardware and be utilized by both PWC's and PWD's (10:1).

This system was developed on a Honeywell H-200 at PWC San Diego. As early as October 1978, the first automated Navy RMPA budget submission was prepared for OSD. This submission summarized the twenty-two major claimant budgets by budget line. By late 1979, the system produced the first automated AIS report (14:1). The system involves utilizing a main frame computer with key punch card input.

3.1.1 Facilities Inspection Subsystem

The facilities inspection subsystem is a comprehensive program for identifying maintenance and repair deficiencies in the Navy's shore facilities.

Construction, as defined by the Navy, is not included in this system. Within the facilities inspection subsystem there are three components: facilities inventory, facilities inspection, and annual inspection summary (AIS).

The subsystem was developed to enhance the facilities inspection program at Public Works Centers and to provide the following:

(1) An accurate inventory of selected Class 1 (land) and Class 2 (buildings, except family housing) customer facilities with descriptive information.

(2) A standard program with a monthly inspection schedule by inspector discipline.

(3) A Facility Inspection Report generated by Discipline for each customer facility inspected.

(4) A list of all unfunded and current inspection year funded deficiencies that are maintenance and repair items.

(5) Mechanized Annual Inspection Summary reports for each customer activity (11:1-1).

3.1.1.1 Facilities Inventory Master List

This is an inventory of all Class 1 (land) and Class 2 (buildings) property within the Navy. The information is compiled by PWC inspectors. The reports

include information on the number, size, type, length, width, stories, height, area, and condition of the property (11:2-1).

The condition is determined by the inspectors and classified as new, good, fair, and poor. The condition of the facility is not listed on the maintenance and repair deficiency reports.

3.1.1.2 Inspection

The inspection process calls for periodic inspections of all shore facilities by inspector disciplines to determine the physical condition of the facility. The subsystem has a scheduling component to schedule these inspections. The inspection reports discussed in chapter four, as well as an automated report, are generated from the data collected. Frequency of inspection depends on type and condition of facility and is normally at one to three year intervals. All deficiencies over $250 are included on the automated reports, including the AIS.

3.1.1.3 Reports

The system has been designed to generate several reports. The inspection report, a manual report describing the deficiency, was discussed earlier. There

are numerous mechanized reports which are descibed in Appendix B. Sample reports are included in Appendix C. The key reports for managing MRP are the 5D29 facilities deficiency profile (month/year) and the 8D53 Type "A" annual inspection summary (see appendixes B and C).

The 5D29 report lists those deficiencies that require some activity input regarding type and deferability of the work (deferable/nondeferable). If this report is kept current on a monthly basis, the 8D53 AIS report will be current at year end and will require minimal effort prior to submitting it to the major claimant. The monthly report is not always sent to the activities at all PWCs.

3.1.2 Benefits/Problems

These reports carry a wealth of information. One problem is that the information cannot easily be sorted to fit the individual activity's desires. The system has the benefit of a large computer, but it has the drawback of key punched, time consuming input. This system has achieved its initial objectives but technological advances quickly outdated it.

The subsystem reports provide a snapshot of the activity at a given point in time. The problem is that the information is really only useful, in a management sense,

on a total dollar basis. To plan a long term execution program with this system is unrealistic.

3.1.3 Automated Data System (ADS)

The ADS system was developed to improve the PWC FIS system. This system utilizes CRT terminals tied to several subsystem main frames. This eliminates the key punch function and provides faster response time. It is an integrated system providing all of the support that BEST will provide the PWDs.

The ADS system has been around for eight to ten years, but installation at the various PWCs has been delayed. PWC San Diego has it installed, but it is still being debugged. PWC Pensacola is scheduled to receive it in the near future (8:1).

This system has been delayed for too long. Technological advances have made this system somewhat inefficient. Better systems exist but the implementation process seems slow. ADS will help those PWC's that have limited ADP support, but they are not considered the best alternative by many users (8:1).

3.2 Base Engineering Support, Technical (BEST)

BEST is an automated data processing support system being developed for Navy Public Works Departments (PWD).

BEST is designed to be a simple, flexible, interactive system that the PWD personnel will operate and control. This system will provide standardized management procedures for the 132 PWDs worldwide. The system is comprised of standard user-friendly software on a micro computer system (1:1).

The typical PWD will have three central processing units (CPU) with CRT terminals, printers, and disk drives. The system will operate Honeywell DP-6 system software. The three CPU's will be designed for the following modules:

Maintenance and Utilities Module

-Emergency/Service Module (ES)

-Work Input Control (WIC)

-Facilities Engineering Job Estimating (FEJE)

-Shore Facilities Inspection (SFI)

-Utilities (UT)

Transportation

Family Housing (1:4,16).

3.2.1 Transportation and Family Housing Modules

These modules will not be discussed because, while they are important aspects of the PWD function, they are beyond the context of this report.

3.2.2 Maintenance and Utilities Module

This module also covers many important applications that are beyond the context of this report. The ES module supports all efforts associated with planning, scheduling, and analysis of routine work generally requiring sixteen man hours or less to perform. The SFI performs all clerical functions and operations associated with controlled inspections other than those required for the AIS. The FEJE module is an automated work estimating process to estimate jobs performed by in-house personnel (1:53-55).

3.2.2.1 Work Input Control Module

The primary role of this module is performance of all normal clerical operations associated with the receipt, recording, and controlling of activity work requests. This includes the scheduling of shop personnel for performance of work. After the work is completed, records are transferred from the active file to a history file.

This module also provides the means for generating the several standard reports associated with MRP, including the AIS. This system will provide PWDs with a capability at least equal to that of the PWCs (1:3). This will also provide PWDs with the means of producing long term maintenance execution plans. The system will

allow management to forecast projected backlog based on actual budget figures.

3.2.3 Benefits/Problems

The prototype system at Port Hueneme has been well received. The BEST system provides those functions mentioned above and can be enhanced to include such functions as: Budget and Finance, Real Property Management, Facilities Planning and Programming, Material Management, Personnel and Payroll, and many others.

The system is state of the art and is user-friendly, interactive, and compact. The system can easily provide the means to compile MRP information into a long term execution plan.

Some initial complaints of the system are related to its implementation. While the Navy researched the system thoroughly and had success with the prototype, the potential end users of the system feel that this system is being forced on them. There is also a minor problem in some user-unique reporting requirements. BEST may need additional programming to satisfy the diverse needs of the users.

The benefits of BEST clearly outweigh the problems. However, the implementation plan will take years, and any delays could have serious consequences.

Technological advances in micro computers could easily cause problems for BEST (7:1).

3.3 PWC San Diego's Micro Computers

PWC San Diego, along with NAVFAC (FAC 151) San Diego, developed a multi-year maintenance planning program for stand alone micro computers. This represents a mechanized approach to public works management that can correlate maintenance and repair information into useful information packages.

The system was developed on a Radio Shack TRS-80, but the software is compatible with the Navy's new standard Zenith Z-120 micro computer. It is a user-friendly system, utilizing display screen type input (Fig. 3-1), eliminating extensive programming and training for the user. The typical stand alone system utilizes the micro computer, a hard disk drive, and a printer.

3.3.1 Installation Schedule

This system has been successfully installed at five activities in the San Diego area. Each of these activities is served by a Staff Civil Engineer (SCE). The system is planned to be made available to other PWC's, PWD's, and PWLA's, with full implementation by fiscal year 1985 (13:1).

```
                              R O O F    D A T A

BUILDING NUMBER                SQUARE FOOTAGE                LOCATION
================================================================================
 ROOF TYPE     SQUARES     VENTS     LAST ROOFED     NEXT ROOF     CONDI
==========   ========   =======   ============   ==========   ======
*

                              R O O F    D A T A

                     P R I O R I T I Z A T I O N    A I D
GENERAL STRUCTURAL CONDITION:      (NOTE: Conditions must be entered on
GENERAL MECHANICAL CONDITION:       all screens for average to be valid)
GENERAL ELECTRICAL CONDITION:                  AVERAGE BUILDING CONDITION:
GENERAL EXT. PAINT CONDITION:
* GENERAL ROOF CONDITION BASED ON MAIN ROOF AND IS USED IN AVERAGE COND
                     P R I O R I T I Z A T I O N    A I D
```

SAMPLE DISPLAY SCREEN

FIGURE 3-1

Here again, the planned installation schedule is not being met. PWC Pearl Harbor's "installation" is completed. However, due to man power shortages, PWC Pearl's installation of the system at the activities it serves is slow at best. The installation of the system is lateral. It is not directed from higher authority. The potential end users are receptive. Unfortunately, there is not a sense of urgency to install the system.

3.3.2 Capabilities of the System

This system seems ideally suited for activity level application. It can be an ongoing, useful, mechanized management tool for the local activity's development of multi-year maintenance execution plans. The system can provide prioritized maintenance and repair information; as well as working estimates, job plans, facility inventory information, and AIS reports. This system can apply the activity's budget directly to the MRP backlog and develop long range plans to reduce the backlog.

The system operates around several interactive files. Files on building data, a cost estimating guide, and a deficiency list all interact to produce cost estimates, job plans, and funding execution plans. The system can sort information in a variety of ways.

Basically, the user inputs an inventory of all the facilities at the activity; including the number and type of doors, windows, roofs, etc. This includes overall condition and importance of the facility (for prioritization). An updated listing of facility deficiencies file is then created. A cost estimating guide file and any special files such as waterfront, runways, etc. are input into the system.

Using this data base and the activity's budget information, the software can create job estimates, spending plans, recurring maintenance needs, painting, paving, and roofing plans. All mechanized reports are easily modified for budget changes. This system is inexpensive, fast, and user-friendly, the ideal management tool at the activity level.

3.3.3 Problems/Benefits

The major problem identified thus far with this system is with its installation plan. The strategy chosen (as discussed in section 3.3.1) is a lateral one, and may cause serious delays. Furthermore, this system applies only to the activity level. It must be considered as satisfying only one facet of the total system's needs.

The benefit is that it provides an excellent tool at the level of the chain of command that has the greatest

impact on the validation of the backlog and on spending MRP dollars in an efficient manner. If the backlog is to be decreased it must happen at the activity level. This system can make it happen.

One side benefit from the system is the initial detailed inspection and validation of the deficiency listing. All of the activities in San Diego using this system saw dramatic increases in the backlog. This gave them a more realistic picture of their actual problems. A realistic deficiency listing is essential to reduction of the backlog.

Another benefit is having a mechanized way of developing cost estimates that directly reduce the backlog in an expedient manner. This allowed one activity in San Diego to obligate $5 million on a last minute basis, at fiscal year end. This was $5 million that went directly to reducing the backlog.

CHAPTER FOUR

MANAGING THE BACKLOG AT THE ACTIVITY LEVEL

4.1 Introduction

As discussed earlier, the key player in managing MRP backlog is the activity. The responsibility for generating the backlog data lies with the activity. How the activity goes about this is relatively structured by direction from higher echelons.

There are numerous documents within the Navy that provide instruction and procedures for managing and maintaining shore facilities. The various instructions and manuals range from the Secretary of the Navy level on down and provide detailed guidance to these activities.

Key overall guidance comes from four main sources. Two CNO instructions, OPNAVINST 11010.23 and OPNAVINST 11010.34, cover the RMPA management guidelines and reporting procedures respectively. MO-322 is a NAVFAC manual providing specific guidance on maintenance management for shore facilities. This includes details on the controlled inspection program. NAVFAC P-450 is a Public Works Center management system manual. Basically, NAVFAC P-450 is a rewrite of MO-322, refined to adapt to the automated system used by PWC's for maintenance management.

All Navy RMPA activities are bound by the first three instructions. Additional requirements are often added by the major claimants (MC). For example, some MC's require their activities to submit the reports required in these instructions but have modified the report format to meet their needs. This chapter will provide information on the types of organizations performing the MRP management function and will provide an overview of the requirements, procedures, and reports generated at the activity level.

4.2 Types of Public Works Organizations

All RMPA activities are served by one of three basic types of public works organizations. They are Public Works Lead Activity, Public Works Department, and Public Works Center. There are approximately 220 naval public works organizations worldwide. These organizations vary greatly in size and cannot conform to a single configuration. Each PW organization is unique to the activity and area it serves (12:2-8).

4.2.1 Public Works Department (PWD)

There are 132 PWD's worldwide that manage $2 billion of RPMA funds annually. A PWD is a department under the Commanding Officer of a Marine Corps or Naval Shore Activity. The Public Works Officer, as the

department head, is responsible for the maintenance and operation of all facilities and equipment on board the activity (12:2-7). The PWD has its own maintenance staff, estimators, engineers, etc. The PWD is provided with an annual budget to pay for personnel, administration, and material. PWDs often do work on a reimbursable basis to tenant activities aboard the base. A typical PWD has 200-400 employees.

4.2.2 Public Works Lead Activity (PWLA)

The Public Works Lead Activity is a large PWD that services additional activities within its geographical area. For example, a large shipyard PWD may provide PW services to smaller activities located near the shipyard. Services are generally provided on a reimbursable basis. The PWLA functions nearly the same as the PWD.

4.2.3 Public Works Center (PWC)

There are nine PWCs worldwide. PWCs provide services for over 40% of all Navy activities. A PWC is basically a regional consolidation of several PWDs. PWCs were formed to more efficiently manage resources and to eliminate duplication.

Unlike PWDs and PWLAs, PWCs are independent activities, commanded by a CEC officer. They provide a

full range of PW services on a fully reimbursable basis to the numerous commands within their geographical area.

Another major difference between a PWC and a PWD is that PWCs are not approppriated funded activities. In other words, they receive no funds from Congress. They are industrially funded, non-profit organizations. Each PWC was initially given an operating fund or corpus, typically $2 million, and is required to maintain a no-profit, no-loss balance. When a profit or loss is experienced the rates PWCs charge their customers are either lowered or raised. A typical PWC will have 1500-2000 employees providing a vast range of services, from routine maintenance, utilities, and tansportation services, to engineering services including design, and family housing services.

Those activities served by a PWC have either an Activity Civil Engineer (ACE) or a Staff Civil Engineer (SCE). The ACE or SCE is normally a CEC officer. The ACE is assigned to the PWC and represents many small or one to two medium sized activities. The ACE provides advice to the activity on facility matters.

The SCE is assigned to the activity served by a PWLA or a PWC. The SCE is the activity commanding officer's advisor for all facilities matters, acting much like the PWO (12:2-9). The SCE provides an activity with

experienced facility management talent to enable intelligent decisions on how to use limited facility maintenance and operations resources to the best advantage.

4.3 Established Activity Requirements

Good management practice would dictate the need for managers within the unilinear chain of command to maintain profiles of relevant information for use in the programming and execution of the RPMA program. The AIS and its companion narrative assessment (NA) provide real property condition data in support of this need (6:2).

All activities having plant account custody of land or facilities are responsible for many facets relating to MRP. The activity must advise the major claimant or sub-claimant on the material condition of assigned facilities and any mission degradation resulting from major deficiences on an annual basis. The activity must also advise the immediate superior of any emergent facility condition which cannot be corrected before mission capability suffers. The activity must also establish fiscal and administrative controls to stabilize work planning for activity-level maintenance and repair by commitment early in the fiscal year of maximum practicable maintenance and repair funding (2:I-2).

Minor alteration expenditures must be limited to established targets. The planning, design, and

accomplishment of minor construction/alteration work by station forces must not interfere with or consume manpower or funds needed to plan, estimate, or accomplish maintenance repair work. The level of maintenance to facilities planned for demolition, renovation, replacement, or any classification other than full use must be minimized. Standards of reduced maintenance shall be appropriate to the planned remaining utilization of the facility as well as safety considerations (2:I-3,4).

Facility deficiencies must be determined primarily through an effective shore facilities inspection system. Inspection-generated work should constitute a substantial portion of the total work performed at the activity in any given year. This means that a large percentage of facility deficiencies are corrected before they are included in the AIS.

Preparing and using an annual maintenance execution plan, as specified in NAVFAC MO-322, shall be done regardless of the fund source from which work will be accomplished and regardless of who will perform the work. Provision shall be made to continually validate and prioritize the work according to mission, safety, health, and material condition considerations. Proper analysis of the AIS/NA coupled with development of realistic long term

objectives should lead to resource allocation plans at all levels of command below the CNO (6:2).

4.4 Controlled Inspections

The established procedure to manage the MRP backlog is to inspect the facilities, identify and report the deficiencies, and develop a long term plan to reduce the deficiency backlog. The most critical element of this process is that of the controlled inspection. A controlled inspection is a scheduled examination of facilities by PW inspectors to determine the physical condition with respect to uniform maintenance standards. The inspections are divided into structural, mechanical, and electrical disciplines. Typical report forms are shown in Figures 4-1 and 4-2. Successful operation of a continuous inspection system is contingent upon an up-to-date inventory of facilities and the use of uniform maintenance standards (4:1-1). One objective of the inspection is to provide a realistic backlog of work to permit long term planning and budget justification (12:6-12).

Controlled inspections are managed differently in PWCs than in PWDs. Due to the large size of PWCs, the inspectors are a separate division from the planners and estimators (P&Es) that provide working estimates that

FACILITY INSPECTION REPORT
NAVFAC-7-11014/2 (05-84)

1. FACILITY NUMBER	2. ACTIVITY	3. LOCATION
153	NAVAL STATION	05 26 3821

4. DEFICIENCY ITEM NUMBER	5. DESCRIPTION OF DEFICIENCY
F 20456.7	REPRS. PLUMB. MISC

☐ ELECTRICAL ☒ MECHANICAL ☐ STRUCTURAL ☐ ROOFING ☐ SPECIAL

7. DESCRIPTION OF WORK

1. Boiler Room NIE Corner of Bldg:
Remove & Install New 3/4" Dielectric
Unions on Hot & Cold Water Lines at
the Boiler

2. West Side of Bldg Exterior:
Remove & Install new gas line piping
to Bldg 20LF of 1" pipe w/3 fittings &
4 pipe hangers

3. North End of Bldg: Mens Head
Remove & Replace flushometer & Valve
on #1 Commode

4. North/East End of Bldg Womens Head
Remove & install New Lavatory & Trim
Present Unit Cracked & Broken. Safety
Hazard

	LABOR COSTS	MATERIAL COSTS	TOTAL COSTS
8. TOTAL THIS PAGE	289	201	490
9. TOTAL FOLLOWING PAGE(S)	337	191	528
10. TOTAL DEFICIENCY COST ESTIMATE			1018

11. PREPARED BY (INSPECTOR)	12. REVIEWED BY	13. DATE
DOBSON		2-2-84

INSPECTION REPORT

FIGURE 4-1

INSPECTOR'S REPORT
NAVFAC 11012/36 (REV. 9-72)
S/N 0105-LF-003-/002

Instructions for completing form are contained in NAVFAC MO-322, Vol. I

☐ DEIS ☐ CONTROL INSPECTION

1 FACILITY NO.	2 COST ACCOUNT NO.	3 F A C	4 CATEGORY CODE	5. FUNCT ACCT NO	6 L M C	7 DATE SCHED: ACT	8 MAJ INSPECTION BY INITIAL	DATE

9. DESCRIPTION AND LOCATION

10. INSPECTOR	11. INSPECTION TIME USED	12 SHEET NO. OF

13. DESCRIPTION OF ITEM AND DEFICIENCY

INSPECTION REPORT

FIGURE 4-2

activities can fund to accomplish the work. Due to the vast area the PWC covers, and the typical limited inspection staff, the SCE or ACE is not usually aware of when the inspectors do their inspections. Furthermore, the inspectors are not always familiar with the history or long term plans for the facilities they inspect. In many cases, the estimates provided by PWC inspectors are lower than those provided by the P&Es for identical deficiencies.

In PWDs the inspectors generally become familiar with the facility's history and potential future use. This is simply due to economies of scale and is not a reflection of the caliber of personnel. These inspectors' reports are often used for funding purposes. Little cost escalation is noted. They also have the advantage of being a part of the activity and typically generate project type deficiencies for the AIS report rather than line item deficiencies. This can provide a more realistic picture of the actual condition of the facilities.

As stated in chapter one, continued drawdowns of RPMA resources (dollars and personnel) have resulted in a catastrophic loss of dedicated trained inspection personnel. In many cases, there was virtual abandonment of the Control Inspection program. Unfortunately, with the renewed emphasis today it is assumed by some that valid requirements can be quickly identified via the control

inspection process. This is simply not true. Although control inspection is receiving new life, immediate results cannot be expected to approach 100% effectiveness. It must be recognized that the total inspection requirement has not yet been fully restored, which means many deficiencies will continue to remain undetected. This contributes significantly to the validity, or lack thereof, of the backlog of MRP (3:2).

4.5 Required Reports

As discussed earlier, required reports at the activity level can vary between major claimants. Three basic items, however, are required to be reported up the chain of command. One is a narrative assessment (NA) of the existing condition of the facilities. The second item is the total amount and breakdown of the nondeferable backlog maintenance and repair. The third is the total backlog of maintenance and repair, including deferable backlog.

4.5.1 The Narrative Assessment (NA)

Existing instructions require the NA to be expressed in terms of readiness. However, this is currently being done on a purely indirect basis. There are no identified guidelines as to any minimum required standards for readiness, nor are there standard guidelines

for determining any adverse impact on readiness the deficiencies may have. This results in inconsistent and varied reports as to the true condition and state of readiness. What may be an acceptable condition to one activity could be completely unacceptable to another. This can cause overstated or understated assessments.

NAVFAC is currently addressing the readiness problem in an attempt to place increased emphasis on the importance of MRP funding. Identifying readiness in quantifiable terms, which would be required to establish equitable standards, would be difficult at best. Even with detailed guidelines such as those provided for inspection in MO-322, the resulting report would still be controlled by the subjective nature of the preparer. Guidelines are often interpreted quite differently from one individual to another. An attempt to improve the report by establishing additional guidelines and requirements could easily result in additional paperwork and regulations without improving the validity of the system.

4.5.2 Nondeferable and Total Backlog

Identifying nondeferable from deferable backlog is required by governing instructions. In chapter one, the term "nondeferable" was defined but the various required elements were not included in the definition. These

elements are exhaustive and somewhat complex in nature. They are general guidelines open for interpretation. Many activities simply ignore them totally. Field reviews reveal that this criteria is inconsistently applied by the inspectors and generally misunderstood (5:1). When reviewing the generated list of deficiencies, those established as nondeferable are usually done so based primarily on their importance to the activity facilities management staff.

The importance of identifying nondeferable versus deferable is open to question. A backlog is a backlog. Classifying and prioritizing deficiencies based on a system that considers safety, readiness, importance of facility to mission, and general facility condition may be more effective. This is being done to some extent on the micro-computers discussed in chapter three. Using this method to develop long range execution plans could eliminate the need to identify items as nondeferable.

4.6 Maintenance Execution Plans

Maintenance execution plans, as identified in chapter two, can most simply be described as long term plans to execute existing and future MRP needs based on existing and future budgets. These plans would include a level multi-year MRP funding plan, projection of potential

projects requiring higher echelon approval (special projects), information to assist in replacement of facilities decisions (MCN program), and development of accurate estimates for determining long and short term funding requirements.

Maintenance plans have been around for many years. Most of these older plans were basically historical information projected into the future. Effective plans that actually tie the budget into the backlog of MRP were, and still are, unable to be completed at many activities without assistance from computers.

A long term, five year plan would provide excellent justification for budget requests. In addition it would be a spending guide and a hands-on means to show what affect, short and long term, a budget increase or decrease would have. The CNO submits budget requests with a five year plan. Having activity generated five year plans would enhance the entire system including the CNO's submission.

The key is that without computer assistance, an effective usable plan is not feasible for many activities. Figure 4-3 is the outline of a maintenance plan generated for the Naval Training Center (NTC), on the micro computers that PWC San Diego developed. The micro computer enables

-NTC MAINTENANCE PLAN-

I. EXECUTIVE SUMMARY
   A. INTRODUCTION
   B. PLAN DIRECTION
   C. INSTALLATION DESCRIPTION
   D. FINDINGS

II. BUILDINGS MAINTEANCE SUMMARIES
   A. STEP ONE SUBMISSIONS
   B. FUNDABLE ESTIMATES
   C. SCOPING ESTIMATES
   D. MINOR RECOMMENDATIONS

III. MECHANIZED PRIORITIZED LISTING OF CURRENT STEP ONE SUBMISSIONS

IV. MECHANIZED PRIORITIZED MAINTENANCE DEFICIENCY ESTIMATE LISTING

V. MECHANIZED RECURRING EXTERIOR PAINTING PLAN

VI. MECHANIZED RECURRING ROOFING PLAN

VII. MECHANIZED RECURRING PAVING PLAN

VIII. ASSESSMENT AND RECOMMENDATIONS FOR RECURRING MAINTENANCE PLAN
   A. DYNAMIC EQUIPMENT
   B. GROUNDS EQUIPMENT

OUTLINE OF NTC MAINTENANCE PLAN

FIGURE 4-3

the plan to be revised and updated as required with minimal effort.

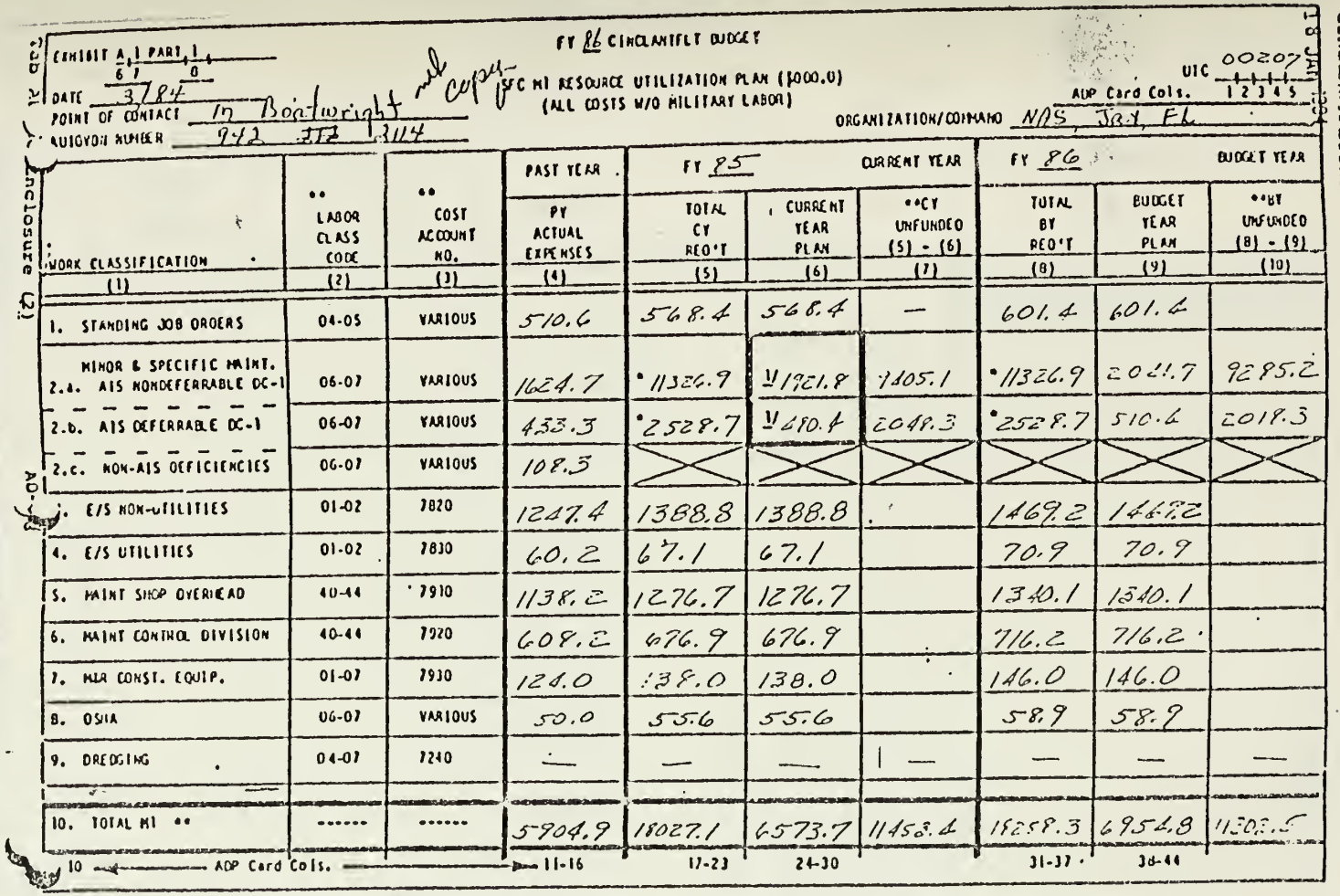
NTC's plan is quite extensive, covering many facets of the total MRP program at NTC. This plan takes minimal effort yet provides detailed long term and short term execution plans.

In contrast to this, Figure 4-4 is the manually generated maintenance plan of NAS Jacksonville, Florida. This plan is considered quite adequate by the NAS PWD staff. The PWD has an excellent inspection program and good control over inspections, estimates, and funding.

The quality of either of the aforementioned plans will not be discussed. The important aspect is that each command has generated a usable plan, that identifies one or more years spending. Many activities throughout the Navy never develop plans. The primary reason is that a well thought out, effective plan takes a substantial amount of time. As discussed in chapter three, to verify the backlog and generate an effective report is nearly impossible without some sort of ADP support.

4.7 Budgets

An operating budget is designed to provide a plan against which performance can be measured, variances analyzed, and adjustments made to permit effective



FY 86 CINCLANTFLT BUDGET

EXHIBIT A, 1 PART I, 6 1 0

DATE 3/84

POINT OF CONTACT M Boatwright

AUTOVON NUMBER 942 372 3114

FC M1 RESOURCE UTILIZATION PLAN ($000.0)
(ALL COSTS W/O MILITARY LABOR)

UIC 00207

ADP Card Cols. 1 2 3 4 5

ORGANIZATION/COMMAND NAS, Jax, FL

WORK CLASSIFICATION (1)	** LABOR CLASS CODE (2)	** COST ACCOUNT NO. (3)	PAST YEAR PY ACTUAL EXPENSES (4)	FY 85 CURRENT YEAR TOTAL CY REQ'T (5)	FY 85 CURRENT YEAR CURRENT YEAR PLAN (6)	FY 85 CURRENT YEAR **CY UNFUNDED (5) - (6) (7)	FY 86 BUDGET YEAR TOTAL BY REQ'T (8)	FY 86 BUDGET YEAR BUDGET YEAR PLAN (9)	FY 86 BUDGET YEAR **BY UNFUNDED (8) - (9) (10)
1. STANDING JOB ORDERS	04-05	VARIOUS	510.6	568.4	568.4	—	601.4	601.4	
MINOR & SPECIFIC MAINT. 2.a. AIS NONDEFERRABLE DC-1	06-07	VARIOUS	1624.7	*11326.9	V1921.8	9405.1	*11326.9	2041.7	9285.2
2.b. AIS DEFERRABLE DC-1	06-07	VARIOUS	433.3	*2528.7	V480.4	2048.3	*2528.7	510.4	2018.3
2.c. NON-AIS DEFICIENCIES	06-07	VARIOUS	108.5	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
3. E/S NON-UTILITIES	01-02	7820	1247.4	1388.8	1388.8		1469.2	1469.2	
4. E/S UTILITIES	01-02	7830	60.2	67.1	67.1		70.9	70.9	
5. MAINT SHOP OVERHEAD	40-44	7910	1138.2	1276.7	1276.7		1340.1	1340.1	
6. MAINT CONTROL DIVISION	40-44	7920	608.2	676.9	676.9		716.2	716.2	
7. MLR CONST. EQUIP.	01-07	7930	124.0	138.0	138.0		146.0	146.0	
8. OSHA	06-07	VARIOUS	50.0	55.6	55.6		58.9	58.9	
9. DREDGING	04-07	7240	—	—	—	—	—	—	—
10. TOTAL M1 **	------	------	5904.9	18027.1	6573.7	11453.4	18258.3	6954.8	11303.5
10 ← ADP Card Cols. →			11-16	17-23	24-30		31-37	38-44	

* The sum of lines 2a & b, columns 5 and 8 should represent updates of the activity's latest AIS Code 1 deficiencies.

NOTE 1: These lines indicate resources for backlog reduction; A Maintenance Action Plan (Exhibit A1, Part II) should be developed and work programmed for at least 50% of the resources planned for minor and specific work.

KEYPUNCH INSTRUCTIONS - PUNCH $000.0 as 0000; **00 NOT KEYPUNCH.

Thurs 3-15-84 9:20

CINCLANTFLTINST 7100.2J

18 JAN 1984

Encl (2)

AD-A

NAS JACKSONVILLE MAINTENANCE PLAN

FIGURE 4-4

EXHIBIT A1 PART 2

DATE 3/84

FY 86 CINCLANTFLT BUDGET
MAINTENANCE ACTION PLAN (MAP)

(NON-DEFERRABLE AIS ITEMS SHOULD RECEIVE HIGHEST PRIORITY ON MAP)

UIC ØØ287

POINT OF CONTACT M. Boatwright

ORGANIZATION/COMMAND NAS Jax, FL

TYCOM NUMBER 7-42-114

PRIORITY NO.	JOB ORDER NUMBER/ CONTRACT	AIS LINE/ INSP RPT NO.	BLDG. OR AREA	DESCRIPTION OF JOB	COST ($000.0)	CAN	COMMENTS
							NOTE: PRIORITIES WILL BE ASSIGNED IN ACCORDANCE WITH CNO/CINCLANTFLT INVESTMENT CATEGORY OBJECTIVES.
		21	10	REPAIR MECHANICAL	40.0	71J0	
		193	104	REPAIR MECHANICAL	50.0	7640	
		205	106	REPAIR STRUCTURE.	20.0	71J0	
		254	118	REPAIR ROOF	17.0	71L0	
		255	118	REPAIR ELECTRICAL	25.0	71L0	
		323	143	REPAIR ROOF	00.4	7220	
		340	161	REPAIR MECHANICAL	30.0	71P0	
		363	165	REPAIR ROOF	04.5	71J0	
		379	173	REPAIR ROOF	05.0	7120	
		389	175	REPAIR ROOF	01.5	7140	
		404	193	REPAIR ROOF	25.0	7140	
		409	196	REPAIR ROOF	06.0	7120	
		423	203	REPAIR ROOF	07.0	71K0	
		425	205	REPAIR ROOF	09.0	71K0	

CINCLANTFLTINST 7100.2J
1 Oct 1984

FIGURE 4-4 NAS JACKSONVILLE MAINTENANCE PLAN

management of resources at all echelons. The development of an operating budget is a process of determining valid requirements at the lowest echelon and summarizing these requirements to forward to higher authority (12:13-3).

The Navy considers its budget over a three year span. Past year, current year, and budget year are used to describe each year in the span. The budget cycle consists of the activity preparing the budget, major claimant (MC) review and consolidation with other activities, DOD congressional review, feedback to MC and activity, followed by activity revision and subsequent request. The total process takes approximately fifteen months (12:13-13).

This means that the AIS generated during 1984 must support the 1987 budget request. In essence, the 1987 budget is paying for deficiencies identified in 1984. This three year gap causes further complications in the MRP planning process.

Another complication related to the budget process is descibed as year end dump. Comptrollers at all echelons withhold some percentage of their budgets for contingencies throughout the year. At year end, the money must either be spent or "lost". Not spending the money may cause a decrease in oncoming budget years. Effectively spending "unplanned" money is a challenge. The money is termed "unplanned" because the actual amount is never known. One

year an activity may receive over one million dollars in the last month and the next year only a few thousand.

This concept supports maintenance execution plans that are long term yet flexible for contingencies. Having a long term spending plan for deficiencies would allow activities to effectively spend nearly any amount of dump money. The micro-computers discussed in chapter three are ideally suited for this.

CHAPTER FIVE

SURVEY AND INVESTGATION STAFF INQUIRY

5.1 Introduction

Members of Congress expressed concern that BMAR was on the rise, even though billions of dollars were being spent to reduce it. In a directive dated June 27, 1983, the House Committee on Appropriations requested that an investigation be made into MRP in the Department of Defense. As part of the investigation, visits and discussions were held with representatives of twelve commands, at twenty-eight installations worldwide, of the Army, Navy, and Air Force. In addition, reports of the General Accounting Office, Defense Inspector General, and "others on the subject" were also reviewed by the investigative team (17:1).

The survey/investigation report states that "data on all aspects of the MRP program were obtained". The team used Fiscal Years (FY) 1979 to FY 1984 to allow a sufficient period for evaluation. All the data were kept in "then-year" dollars. The team accounted for currency changes in foreign countries (17:1). The team also held discussions with "representatives of other public sectors and private industry entities" to determine how they

compare to the military in planning, programming and budgeting MRP (17:2).

The team's report basically identifies the findings. While many differences were listed in the way the different services managed facilities maintenance, few conclusions were drawn from the findings. The team made little attempt to recommend best methods or to point out wrong doings although some were implied at times in the report.

This chapter will deal with the survey team's findings that pertain to the U.S. Navy. The chapter will identify the report's major findings and evaluate them. In addition other areas of concern to MRP not identified by the survey team will be discussed.

5.2 Organization

The survey team found that organizationally the Navy was quite similar to the other services at the activity level, but was quite different operationally. They found what they called "decided organizational differences at the department level".

The team found the rationale for the Navy's PWCs and their benefits questionable. The team cited instances where the PWC served some activities but not others in geographically "side-by-side" locations. The report fails

to mention any possible reasons for this, implying inequitable management (17:4).

If the team would have delved into this disparity they would probably have found quite valid justification for this. When the PWCs were formed, the consolidation effort, like any type of change, did not always go smoothly. The process often evolved over a number of years. Some activities retained all or a portion of their own maintenance force due to mission, type of activity (i.e. NIF), or security reasons. There is a real inequity that exists in the facilities staffing of the activities served by the PWCs. The Staff Civil Engineer organizations at various activities in the same area often vary greatly in size and responsibility. This was a result of squabbles over civilian ceiling points. The aforementioned problems really have little detrimental effect on a PWC's customers.

5.3 Defining Maintenance and Repair

The team provided some in depth definitions of the concept of maintenance versus repair in their report. The report hinted towards one of the many small problems that contributes to the rising backlog. The engineers at the activity level often times interpret the definitions of maintenance and repair quite liberally. When a facility

requires some minor repair work many activities will improve the facility under the guise of repair.

The report fails to mention that this stems from some deep rooted problems. As stated in chapter one, a large percentage of Navy facilities were built during World War II as five year, temporary structures. Many times inadequate or improper materials were used in construction simply due to inadequate or incomplete supplies. For example, the building that houses the PWC San Diego Activity Civil Engineers, Production Planners, and Material Department was built as a five year, temporary, warehouse. Due to lack of plywood, gypsum board was installed as roof sheathing. Needless to say this posed serious problems with leaking and deterioration of the gypsum due to moisture.

A second deep seated problem not mentioned in the report is that of facility utilization. Because of the tight limits on funds available for construction/alteration another "make-do" problem exists. A vast majority of Navy activities occupy facilities that were designed for different functions than now occupy them.

For example, for many years the Navy Regional Data Automation Center in San Diego, California, a modern computer organization, occupied a reinforced concrete three story warehouse. This facility had eight inch thick

concrete floors and two foot diameter concrete columns throughout every floor. At the Naval Magazine, Lualualei, Hawaii, the MK 46 torpedo and MK 48 torpedo intermediate maintenance activity (IMA) shops occupy a facility designed for the MK 37 torpedo. Numerous administrative offices are now occupying converted WWII temporary warehouses.

These two fundamental problems are the primary cause for the problem the investigative team refers to as on of definition. The need to make-do with what is available, to live with what is given, causes many activities to read the rules liberally in the activities' favor. This is an attempt to improve the maintenance intensive, improperly designed facilities that must be occupied.

Looking at life cycle costs, as the team discusses, the Navy CEC deserves a great amount of credit. Faced with lack of funding, and therefore the inability to construct replacement facilities, the Navy has managed to maintain countless facilities some 35-45 years past their designed useful life.

5.4 Planning and Programming Problems

The investigative team believes to have found a "planning gap" between various planning phases. They state that none of the activities or higher echelons have a completely integrated planning process (17:12). While this

statement is true in the purest sense, when the vast size and complexity of the organization (the U.S. Navy) is considered, a "completely" integrated plan would be difficult to achieve.

The team goes on to say that while different planning groups, i.e. master plan, Military Construction, MRP, are performing well individually, the groups are independent of each other. The team claims that the Military Construction Program is not being evaluated for its impact on MRP requirements.

In the Navy this is not completely true. When the Annual Inspection Summary (AIS) is kept current as required, the impact is taken into account. The real problem in this area is the unreliability of the Military Construction Program. Requiring Congressional approval of every construction project exceeding $100,000 causes geat time delays in the Military Construction Program. Five to seven years from project concept and documentation submission to actual construction start is optimistic, even for mission essential projects.

Explosive Ordnance Disposal Group One, Lualualei, Hawaii, waited six years to have their MCN project for a new training/administrative building approved for design. Then for three consecutive years the project was cancelled by Congress at the last minute. The existing facilities

have been condemed due to exposure to explosive hazards. They are a WWII temporary barracks and WWII quonset hut, both with extremely high maintenance costs. Year after year money will be spent maintaining these facilities while the wait, which now exceeds ten years, for project approval continues. Project approval is based on established CNO priorities, funding availability, and of "selling" the project to Congress. A project that has strong interest in Congress may edge out an equally important project that has not been "sold". The system works but not expediently.

The point being made is not one of pushing the blame up to Congress, but one of the difficulties surrounding an extremely complex and dynamic environment that those who are planning and programming must deal with. A completely integrated plan, done manually (computers are not yet widely available), that would handle all the contingencies arising in the planning process, is impractical.

5.5 Proliferation of Different Data Processing Programs

The investigative team brings up a valid point regarding a modern data processing system for RPMA/MRP programs. The team found that the advent of low cost, high capability micro computer systems has caused many activities to develop independent programs to aid in

managing MRP. This, as well as the Navy's current computer systems, was discussed in chapter three.

5.6 Decentralized Management Philosophy

It is well understood that an organization as large as the Department of Defense and even one as large as the U.S. Navy must have a decentralized management philosophy. The survey team discusses some of the problems with the existing management concepts.

The team brings up some valid points in regards to the decentralized management within the DOD and USN. While the Navy maintains decentralized authority on most matters, there is a tight centralized approach to managing the MRP budgets assigned to the activities. As discussed earlier, any construction project exceeding $100,000 must be approved by Congress. Any repair project, exceeding $75,000 must be approved by an activity's major claimant. Pure maintenance projects have an unlimited funding limit at the activity level. Pure maintenance, as confined to the definition, is generally a relatively small portion of the activities backlog.

On the one hand, the activity is expected to manage their backlog and reduce it to a reasonable level, through the decentralized management approach. On the other hand,

the activity must perform this by turning funding decision control over to their superiors.

This is effective in controlling abuse in the system but can be ineffective for the activities' planners. This process generates a substantial amount of paperwork and causes a long lead time to develop between project identification and project completion. It is not unusual for a repair project to wait three to five years for funding. Often times a needed project will slip from year to year due to budget constraints or contingencies at the major claimant level, causing the activity to spend additional money on short term fixes.

This also contributes to another problem identified by the survey team. Navy military personnel normally spend two to three years in an assignment. During this time, the personnel must demonstrate that they are effective, responsible top-notch performers. All too often, short term solutions that look good today are chosen over long term solutions that will credit a successor. So the survey team's comment that activities "do what is visible" has merit. This can have disasterous effects on reducing the backlog.

The problem of short term solutions is probably one of the single most frustrating aspects of the facility planner's job. Dealing with "bosses" that want to look

good today even if a long term solution would be best, and expending funds on interim solutions while waiting for a project to be approved at a higher level, cause many problems for planning personnel.

If an activity could submit a long term plan, say a five year execution plan, for approval, and if they could be budgeted for the plan, allowing for contingencies, the activity could eliminate many of these short term fix problems. This would put the activity's CO on record as to how the activity MRP dollars are to be spent. In addition it would provide a means for the CO and facilities personnel to "look good" in the short run. This method would provide decentralized management while maintaining effective means for centralized control.

The team further discusses a communication problem. Success at one installation is not spread to other similar installations. This results in recreating the wheel. This problem would be expected to exist to some extent in a large organization. The problem is serious within the Navy, particularly in the area of ADP support and reporting procedures. Biweekly newsletters from Washington, conferences among CO's of PWCs, large PWDs, EFDs, as well as a quarterly magazine and fact sheets from the CEC help to reduce this problem within the Navy.

5.7 The MRP Floor

As indicated by the survey team, the Navy does not assign an MRP floor at the activity level (17:23). As discussed in chapter one, the MRP floor was established to ensure that the military services spent allocated MRP money on MRP.

Not assigning a floor at the activity level has both advantages and disadvantages. It allows flexibility for major claimants and activity COs to divert funds either to commands in a contingency situation (major claimants) or to divert funds to mission essential activities (CO level) (17:34).

This flexibility is also a problem for activity facility planners. Flexibility creates a problem of short term solutions as discussed earlier in section 5.6. Another problem arising from flexibility is that of diversion of funds from the MRP budget. Last minute cancellation of major claimant approved projects or loss of MRP funds at the activity level to fund a mission essential need often occurs. This can leave the facility planners in a constant mode of contingency planning, being forced to use short term solutions.

The survey report discusses a lack of accountability towards meeting the MRP floor. Information at the activity level is not available to determine if the floor is met.

Furthermore, the team reported that an activity can fail to meet its MRP target and not violate the MRP floor regulation. This is due to the Navy's decision to look at the MRP floor service wide vice per activity like other branches of the service do. This allows the Major Claimants the flexibility to provide an excess floor at some activities to cover mission essential MRP, by providing other activities less than the target MRP. This flexibility is a problem as well. It causes the disruptions and uncertainties for the facilities planner discussed earlier. Again the five year maintenance execution plan discussed earlier would provide a solution to some of the problems addressed, without losing the flexibility required to control funds.

5.8 Factors Impacting Productive Use of MRP Funds

The survey team identified several areas that impact MRP. As mentioned earlier, many factors exist that reduce the productive use of MRP funds. In addition to the areas of short term "do what looks good today" problems, many other factors exist. The activity has little control over these factors. They do however, have the ability to manage some of the factors. These factors were addressed in section 1.4 and in chapter four.

5.9 MRP Readiness Problems

The survey team noted that not one activity investigated could provide a list of MRP projects that related to readiness and sustainability of military units. This seems to be true in the Navy. While readiness is considered a primary reason for providing MRP funds, it is rarely identified in project terms for MRP.

As discussed earlier, there is a push from NAVFAC to increase the role readiness plays in MRP. The aim is towards requiring activity COs to identify the importance of each of their facilities in regards to mission and readiness. This is an attempt to increase the importance of MRP relative to spare parts, weapons, aircraft, and ship funding.

Requiring the CO to identify the importance of each facility at the activity to readiness, is done for several reasons. It can increase the accountability of the CO, as well as help generate some personal interest of the CO in MRP.

A separate program for readiness projects may not be worth the added paperwork and related costs. While readiness projects are not identified on a separate listing, readiness is considered in broad terms for all projects. Mission essential projects already receive top priority funding and are rarely delayed. Routine priority

projects would not benefit from any additional readiness requirement.

Where readiness needs to be addressed is during the maintenance execution planning phase. Developing a rating scale or standards for readiness at the activity level, to apply to a priority system would be beneficial. The micro computer system addressed in chapter three utilizes a prioritization rating scale now. Modifying the factors to include readiness would be a simple procedure.

A short, simple guide providing standards for activities to use to generate a readiness condition rating, would be a useful, cost effective approach to improve the readiness concept in MRP planning. This would aid the activity in developing a prioritized list of their facilities based on existing condition and readiness.

5.10 Alternatives to BMAR

Throughout the rest of the report the survey team addresses the accuracy of BMAR, new alternatives to the existing program, and private industries' methods. The survey team stated that many officials feel that BMAR is a poor indicator in determining the condition of facilities. Based on it's use in the current system this is true. However, the system itself is not beyond improvement that can make BMAR a more accurate reflection (17:57).

The Navy's readiness mathematical model as presented does not appear to be a valid alternative to the existing system. This model will have the activities score themselves under twenty-six subcategories, roll them into three categories, and rate them on a subjective four-point evaluation. A cost factor is applied to readiness scores to determine MRP funding (17:58).

This method is highly subjective and open to greater "exaggeration" than the existing system. Furthermore, as the survey team points out, activity COs will be reluctant to report their commands as lagging in readiness. As stated earlier in section 5.9, the readiness concept should be limited to prioritizing facilities for funding consideration, limiting it to an internal activity management tool.

Other alternatives, including cost per square foot, macro model approach, cost of ownership and other approaches, have some merit. However, the existing system warrants reconsideration. The system is not so inefficient that it should be scrapped. Many years of effort have gone into developing it.

The continuous inspection process is essential to effective maintenance management and will be continued regardless of the system used. All of the data required to make the BMAR system valid is generated by the continuous

inspection program. A more consistent and efficient means of sorting and forwarding the data is all that is required to make the system valid.

CHAPTER SIX

KEY LESSONS LEARNED AND CHALLENGES FOR THE FUTURE

6.1 Summation of Lessons Learned

Deterioration of facilities will continue to be a substantial problem. Funding for replacement facilities will continue to fall well behind the requirement. Therefore effective maintenance and repair planning will be essential to maintain readiness throughout the Navy.

Controlled inspections are essential to the MRP planning effort. A more effective means to use the data gathered in the inspections is required. Under no circumstances can the Navy afford to eliminate or reduce the inspection program. This would cause serious long term problems similar to those experienced in the 1970's.

Readiness must play a more important role in MRP planning. Increased emphasis at the activity level is essential. The room for subjectivity in the reporting method for readiness must be minimized to avoid problems similar to those experienced with the existing system.

Improvements must be made in all facets of ADP support. Communication must be improved so information on successes can be shared. Additional support in the form of micro and mini computers at the activity level is essential. Activities need improved methods to sort the

inspection data. Implementation must be well planned to avoid delays that cause technology to outdate the systems before they are installed. The computer systems provided must be easily adaptable to future technological advances. In addition, the installation must be directed and strongly supported from higher authority to avoid delays.

Reporting procedures need some form of standardization. The best form may be in five year mechanized maintenance execution plans. Support from high echelons to these plans is essential for their success.

Short term solutions must be minimized. Long range planning must be given top priority down through the chain of command. Rewards for activity COs who engage in long range plans are essential. Maintenance execution plans are an excellent written record of long term planning.

Long term planning must also be done when considering a solution to the BMAR problem identified by Congress. The problem requires much more in-depth study than has been done thus far. The survey and investigation staff report only scratches the surface. A hasty decision on a replacement system may only compound the problems.

6.2 Challenges for the Future

The unique problems faced by an organization as large and as complex as the U.S. Navy may always exist.

Congressional control over funding will probably continue to provide long lead time problems at the activity level. The budget cycle will probably not be shortened. The list could go on and on. Realizing these problems exist and working within the system to deal with them is the best alternative.

While BMAR may not be a good indicator of facility conditions, we must keep in mind that BMAR is only a term. The existing system has all the raw data required to provide an accurate picture of the Navy's shore facilities condition. "Redefining" BMAR would be a simple process. A backlog is a backlog. Deferability should only be of concern at the activity level for use in assigning priorities.

Readiness must be tied to the prioritization of deficiencies at the activity level, without creating another subjective system. The micro-computer system discussed in section 3.3 could easily be modified to include readiness. Adding a readiness rating to the system's prioritization feature would be a simple process. This would allow the activity to develop a prioritized list of deficiencies. This list could then be applied directly to the activity budget to easily determine the impact MRP funding would have on readiness.

The result of this process would be the development of a long term maintenance execution plan. This plan could be submitted with the activity budget request to show higher authority what impact inadequate MRP funding would have on readiness. In other words, the plan would show that if certain deficiencies were not funded, certain mission functions would not be performed adequately. By so identifying mission related activity requirements in a priority listing, higher authority then assumes the responsibility for nonperformance of those mission functions eliminated at the activity due to inadequate funding. At the same time, however, higher authority may re-arrange the activity priorities when/where mission related requirements fit into larger mission roles which may be unknown to the activity. Having all activities submit standard format reports would simplify this re-arranging task for higher authorities. With proper ADP support these plans could easily be updated and modified for contingencies.

The existing system could become valid with additional management support at the activity level. Adequate manpower for validation of the AIS and for inspections is essential. The activity planners need the means to develop long range maintenance execution plans.

More importantly these plans should be standard Navy wide. This requires support throughout the system from the top down. For activity COs to take a strong interest in and support these plans, requires a means to tie the plans into the reward/penalty system. A CO will support long range planning over short term fixes if rewards for planning exist.

The challenge for the future is one of effective leadership from the CNO down to the activity planners. Effective communication channels and a standardized system is essential. Whichever approach is used, the existing fragmentation of computer support, report types, and of other facets must be eliminated. Everything that is required to provide an effective system already exists. The data for a valid system are there, but they must be collated and communicated in a uniform and consistent program. The existing system could easily be modified by providing integrated ADP support at the activity level. This would allow the development of five year maintenance execution plans and validation of the backlog.

APPENDIX A

SUMMARY OF INTERVIEWS/CONVERSATIONS

Mr. J.E. Roark NAVFAC Code 10 Aug. 15, 1984

During a brief discussion with Mr. Roark the following items were discussed:

-The problem NAVFAC is having with Congress over the ever growing backlog with the increased MRP support.

-The Investigative Staff Survey Report of the House Subcommitte on Appropriations.

-The need to tie readiness into MRP to make it important enough to be given top consideration by activities CO's.

Dave Dutton/Terry Voight NAVFAC Code 1003 Aug. 14, 1984

Discussed overall AIS program from Mr. Dutton's point of view, including:

-Problem of inspections,

-Problem of improper utilization of information--AIS is only a snapshot in time,

-Extensive discussion on Base Readiness Program, tieing AIS and facilities into base readiness. This program requires activity CO's to identify all facilities in terms of their importance to readiness. Then, using this information,

coupled with the AIS, there would be an increased emphasis on the importance of the AIS and of MRP funding.

Dave Williams NAVFAC Code Code 100 Aug. 15, 1984

My discussion with Mr. Williams centered around several areas of the AIS program, including the following:

-Mr. Williams stated that there were 132 PWD's, 88 SCE's, and 9 PWC's reporting under the AIS system. PWC's and SCE's use an automated system, and PWD'S generate their own reports.

-In the 1970's, after Viet Nam, money was taken away from MRP. Many PWD's were forced to cut back and inspectors were the first to go.

-RADM Jortberg established the BMAR program. He convinced Congress and got more MRP money.

-Inreased money caused activities to re-emphasize inspectons. Inspections increased and therefore backlog increased.

-Mr. Williams feels inspection is a major key to the system. The ability to identify consistently throughout the activity as well as the Navy is a major problem.

-AIS is only a snapshot of one point in time.

-Documents are the only tools available for

managers and they are used for unintended purposes.

-Mr. Williams described a controlled study he performed "several years ago" where five inspectors individually inspected the same facility. All had different reports. The reports were compared, the inspectors discussed them, and the reports were given back. The facility was reinspected, and the result was, again, five completely different reports.

-To solve some of the above problems Mr. Williams discussed:

  -Developing detailed condition standards for inspectors to follow.

  -Reorganizing PWD's to provide additional support at the supervisor level and establish Facilities Management Engineer in place of Maintenance Control Director

-Also discussed Human Resource Management and lead-lag effects of leadership, where quick fix leaders can do lasting long term damage to the system as a whole.

LCDR Hunter NAVFAC BEST coordinator Aug. 14, 1984

LCDR Hunter is overseeing the development of the BEST (Base Engineering Support Technical) system. Discussion included the following:

-Civil Engineering Support Office is handling the system with software from Facilities Support Office

-Honeywell DPS 6/40/45/75.

-BEST will be a user friendly system for PWD's, providing automation for many PW functions, including the AIS.

-Model system at Port Hueneme, California.

-Implementation schedule.

Joe Martin NAVFAC Code 1003 Aug. 15, 1984

My discussion with Mr. Martin centered around NAVFAC's rewrite of the AIS instruction, OPNAVINST 11010.34. Mr. Martin's objectives in the rewrite were to provide an instruction that gave the following:

-A clear picture of what information is desired.

-Was easy to use--less verbage, simple, to the point.

-Was easy to follow (reporting procedures)

Mr. Martin will use LANTDIV's instruction as a guide during the rewrite. Type A, B, C reports would be combined

into one for better utilization of information. Revised instruction due out no earlier than April, 1985.

Mr. Curran Smith FAC 151 San Diego Oct. 3, 1984

I called Mr. Smith to get information on the PWCMS computer. Mr.Smith said he would forward pertinent instructions and other documentation describing the PWCMS system. Mr. Smith briefly mentioned the ADS system, stating that it had an extended data base.

Mr. Bill Foster PWC Pensecola Nov. 6, 1984

I discussed the ADS system with Mr. Foster. He stated that PWC really wasn't too keen on receiving ADS. He felt that the system has more interplay than the PWCMS, but that it is not practical, that the system has been "too long on lay-away", and is out of date. Mr. Foster feels there are better systems available and is resisting the ADS installation.

CDR Patrick Cahill APWO NAS Jacksonville, FL.

Nov. 5, 1984

The following items discussed during the interview held in CDR Cahill's office:

-Approximately ten years ago PWC reorganized the inspection process, the AIS and inspection schedules were automated.

-BEST--no uniformity, NAVFAC has instruction on reports yet LANTDIV asks for different format. Is BEST being used? If debugged, system is okay. Feel system is being shoved on PWD's.

-Conflicting instructions regarding inspections. MO-322 requires 100% annual. Some messages defined level of inspections, SECDEF-100% level of inspection, frequency tables, all unclear as to how often inspections should be done.

-Inspectors require ceiling points and do not generate money, expensive but necessary--but how often do you inspect is unanswered.

-System not always accurate in applying MRP dollars, "marketing" can be a major factor into how much MRP funding goes to activity. Difficult to get other than "historical" budget. Current year funds are based on two year old AIS reports.

-A large percent of operating MRP goes to non AIS items.

Mr. Dan Green Supervisor of Inspectors MCD, PWD, NAS

Jacksonville, FL. Nov. 5, 1984

The following items were discussed with Mr. Green:

-There are five inspectors working.

-Preventive Maintenance and Maintenance Control on Computer.

-Inspectors trained-three weeks of school, as well as field experience.

-Some "team" inspecions done.

-"Projects" developed via list of deficiencies.

APPENDIX B

REPORT DESCRIPTION GUIDE

REPORT NUMBER & (COPIES)	REPORT TITLE	PURPOSE & SEQUENCE	USER(S) & (FREQUENCY)
5D29 (Cont'd)		maintaining facility deficiencies. Report is presented in Activity UIC number sequence. Within each Activity UIC, the information is displayed in Facility Number, and corrected and uncorrected Deficiency Item Number sequence. Page break is between each Activity UIC.	
5D31 (1)	INSPECTION WORKLOAD PROJECTION FOR (YEAR) INSPECTOR MONTHS (INSPECTION COUNT)	Report provides summary totals of inspector man equivalents and number of scheduled inspections by Discipline for each month of the calendar year. Report is used to determine if there are sufficient inspectors to accomplish the yearly inspection plan. Report is presented in Activity UIC and Discipline sequence. Report has only one page.	Code 102 (Monthly)
6D41 (2)	FACILITIES INVENTORY MASTER LIST	Report provides facility and discipline level information on all facilities contained in the FIMAD file. Report is used as an inventory record on all facilities being inspected by the PWC Facility Inspection Division. Report is presented in Activity UIC number sequence. Within each Activity, the information is displayed in Facility Number sequence with a page break between each Activity UIC.	Code 102 and Customer Activity (Quarterly)

REPORT NUMBER & (COPIES)	REPORT TITLE	PURPOSE & SEQUENCE	USER(S) & (FREQUENCY)
6D41A (1)	FACILITIES INVENTORY AND INSPECTION SUMMARY	Report provides the number of facilities, the number of facilities scheduled for inspection for an inspection year and the number of facilities inspected during an inspection year. All values are year to date. Report is used to monitor progress of the facilities inspection program against the NAVFAC corporate goals for Facilities Inspection. Report is in activity UIC sequence with summary totals of all UICs for each column. Report has only one page.	Code 102 (Quarterly)
8D53 (2)	TYPE "A" ANNUAL INSPECTION SUMMARY - MAINTENANCE AND REPAIR OF REAL PROPERTY DEFICIENCY LIST	Report provides each customer activity with a mechanized Type "A" Annual Inspection Summary - Maintenance and Repair of Real Property Deficiency List for submission to their respective Major Claimant and/or subclaimant. Report is based on the reporting requirements outlined in the most current version of OPNAVINST 11010.34. Report is presented in customer activity UIC number sequence with a page break between each UIC. Within each UIC, the report is in Facility Number and Deficiency item number sequence. Report lists all unfunded facility deficiencies with current cost estimates and an indication of which deficiencies are deferrable and those that are nondeferrable.	Customer Activity and Code 102 (Yearly or when required)

REPORT NUMBER & (COPIES)	REPORT TITLE	PURPOSE & SEQUENCE	USER(S) & (FREQUENCY)
8D53A (2)	TYPE "A" ANNUAL INSPECTION SUMMARY - TRANSMITTAL	Report provides each customer activity with a mechanized Type "A" Annual Inspection Summary - Transmittal for submission to their respective Major Claimant and/or subclaimant. Report is based on the reporting requirements outlined in the most current version of OPNAVINST 11010.34. This report is used as a transmittal to forward the AIS reports to higher authority. Report also provides quantitative information regarding the scheduled versus actual number of facilities inspected. The report is in customer activity UIC number sequence with a page break between each UIC. All information headings are left blank except numbers 1, 2, 3, 6, 12, 13, and 14.	Customer Activity and Code 102 (Yearly or when required)
8D55 (1)	MAJOR CLAIMANT CARDS FOR AIS	Report is produced during production of AIS reports and provides a listing of UICs and corresponding abbreviated major claimants. The report is used to verify that each UIC has the proper major claimant assignment and the abbreviated name is correct on report 8D59. The report is in UIC number sequence.	Code 102 (Yearly)

REPORT NUMBER & (COPIES)	REPORT TITLE	PURPOSE & SEQUENCE	USER(S) & (FREQUENCY)
8D59 (2)	TYPE "A" ANNUAL INSPECTION SUMMARY - COST ACCOUNT SUMMARY	Report provides each customer activity with a mechanized Type "A" Annual Inspection Summary - Cost Account Summary, for submission to their respective Major Claimant and/or subclaimant. Report is based on the reporting requirements outlined in the most current version of OPNAVINST 11010.34. Report is presented in customer activity UIC number and Fund Source sequence. Page break is between Fund Source. Within each Fund Source, the report is in Investment Category and Cost Account sequence. Report provides a summary of costs for deferrable and nondeferrable Deficiency codes 1 and 2, and total costs for Deficiency codes 1 and 2. The totals are by Fund Source, Investment Category, and Cost Account.	Customer Activity & Code 102 (Yearly or when required)
8D59A (2)	TYPE "A" ANNUAL INSPECTION SUMMARY - NARRATIVE ASSESSMENT	Report provides each customer activity with a mechanized Type "A" Annual Inspection summary - Narrative assessment for submission to their respective Major Claimant and/or subclaimant. Report is based on the reporting requirements outlined in the most current version of OPNAVINST 11010.34. The report indicates the cost of nondeferrable and deferrable deficiencies for last year, the current year, and total funding last year. The totals are by Fund Source and Investment Category. The report is in customer activity UIC number sequence with a page break between each UIC. All information headings are left blank except 1, 2, 3, 4, 8, and 9.	Customer Activity and Code 102 (Yearly or when required)

REPORT NUMBER & (COPIES)	REPORT TITLE	PURPOSE & SEQUENCE	USER(S) & (FREQUENCY)
5D23 (1)	FACILITIES INSPECTION WORKSHEET FOR (MONTH/ YEAR)	Report provides facility, discipline and deficiency level information on all facilities scheduled for inspection during the current schedule month. Report is utilized in the field by facility inspectors as a reference guide and for making field notes. Report is presented in Activity UIC number sequence. Within each Activity UIC, the information is displayed in facility number and discipline sequence. Page break is between each Discipline.	Code 102 (Monthly)
5D25 (1)	FACILITIES TO BE INSPECTED (MONTH/YEAR)	Report provides a list of all facilities that are scheduled to be inspected during the current month. Required disciplines and their estimated hours for inspecting each listed facility are also provided. Facilities scheduled for inspection during previous months but not inspected, will be included on the list. These facilities will have the following message appearing to the extreme right hand side of the report: LATE-SCHEDULED (month/ year). The date represents the original scheduled inspection date. The LATE facilities will appear on the report for 6 months from date scheduled and then they will no longer appear. Report is used to	Code 102 (Monthly)

REPORT NUMBER & (COPIES)	REPORT TITLE	PURPOSE & SEQUENCE	USER(S) & (FREQUENCY)
5D25 (Cont'd)		determine the most effective approach when scheduling the disciplines to inspect the facilities listed on the current inspection schedule. Report is presented in Activity UIC number sequence with a page break between each UIC number. Within each Activity UIC, the information is displayed in Facility Number sequence.	
5D25A (1)	STAFFING REQUIRED FOR INSPECTIONS (MONTH/YEAR)	Report provides the number of month equivalents by Discipline and Level of Inspection required to inspect all facilities listed during each schedule month. Report is used to identify and allocate inspection Discipline resources during each monthly inspection period. Inspector month equivalents are calculated by dividing the summary of all Estimated Inspection Hours for a Discipline for the schedule month by the number 160. Report is presented in Discipline sequence, and within each Discipline, the information is displayed by Level of Inspection. Report has only one page.	Code 102 (Monthly)
5D29 (2)	FACILITIES DEFICIENCY PROFILE FOR (MONTH/YEAR)	Report provides a list of all unfunded and (current fiscal year funded) deficiencies for all facilities contained in the FIMAD file. Report is used by both the Facility Inspection Division and each customer activity in identifying and	Code 102 & Customer Activity (Monthly)

REPORT NUMBER & (COPIES)	REPORT TITLE	PURPOSE & SEQUENCE	USER(S) & (FREQUENCY)
5D21 (1)	FACILITIES INSPECTION VALID TRANSACTION LISTING	Report provides a list of all data input that passed the edit criteria and updated the FIMAD file. Report is used to verify that ADD, CHANGE, and DELETE Actions submitted on update sheets were entered and updated the FIMAD file. Report is presented in Activity UIC number sequence. Within each Activity UIC, the information is displayed in Facility Number and Transaction type sequence. Page break is between each Activity UIC.	Code 102 (Monthly)
5D21A (1)	FACILITIES INSPECTION TRANSACTION ERROR LISTING	Report provides a list of all data that failed to pass the edit criteria and corresponding messages indicating the reason each failed. Report is used to identify the data rejected, the probable cause, and the necessary corrective action. Rejected data will not update the file until corrected and resubmitted. Report is presented in Activity UIC number sequence. Within each Activity UIC the information is displayed in Facility Number and Transaction type sequence. Page break is between each Activity UIC.	Code 102 (Monthly)

REPORT NUMBER & (COPIES)	REPORT TITLE	PURPOSE & SEQUENCE	USER(S) & (FREQUENCY)
5D15 (2)	FACILITIES INVENTORY MASTER LIST - NEW ADDS	Report provides facility and discipline level information on all new facilities added to the FIMAD file during each update process. Report has two basic uses: Supplementing the Facilities Inventory Master List, Report 6D41, and verifying information contained on new facility ADD actions. Report is presented in Activity UIC number sequence. Within each Activity UIC, the information is displayed in Facility Number sequence. Page break is between each Facility Number.	Code 102 and Customer Activity Representative (Monthly)
5D15A (1)	ESTIMATED VERSUS ACTUAL INSPECTION HOURS FOR (MONTH/YEAR)	This report displays the number of Estimated Inspection Hours for scheduled facilities versus the Actual Inspection Hours performed during the month by inspection Discipline. This report is used by the inspection supervisor to evaluate inspection performance. The report is presented in UIC sequence with a page break between each UIC number. Inspection not performed during the current month will not be included in the Estimated Inspection Hours total.	Code 102 (Monthly)

REPORT NUMBER & (COPIES)	REPORT TITLE	PURPOSE & SEQUENCE	USER(S) & (FREQUENCY)
8D61 (2)	HISTORY OF FUNDED DEFICIENCIES FOR (YEAR)	Report is produced at the end of the fiscal year listing all deficiencies that were funded during that year. The listing is provided to each customer activity for a history of their funded deficiencies. Report is in Special Area, Facility Number, and Deficiency Item Number sequence with a page break between each Activity UIC. The report displays the Special Area code, Facility Number, Deficiency Item Number, Description of Deficiency, Cost Estimate and Date Deficiency Funded.	Code 102 and Customer Activities (Yearly)

APPENDIX C

REPORT SAMPLES

ACTIVITY: NAVAL OCEAN SYSTEMS CENTER SAN DIEGO, CA 92152 UIC: N66001

FACILITY NUMBER: 22TU FACILITY NAME: ADM OFFICE/TRAILER FACILITY TYPE: BUILDING CAT CODE: 61010 LI: A

MAP GRID	IRREGULAR	STORIES	ABMP CODE	LENGTH	WIDTH	HEIGHT	AREA / UM	OTHER / UM
K027	NO	1		50	10	9	500 SF	

DISCIPLINE: ELECTRICAL DATE INSP SCH: 05/80 INSP FREQ: 0 SR: 10 CONDITION: **** EST INSP HOURS: 100.1

REPORT 5015A ESTIMATED VERSUS ACTUAL INSPECTION HOURS FOR 06/80 DATE 80-07-01

ACTIVITY: NAVAL OCEAN SYSTEMS CENTER SAN DIEGO, CA 92152 UIC: N6601

DISCIPLINE	ESTIMATED HOURS	ACTUAL HOURS
ELECTRICAL	3.5	4.5
MECHANICAL	3.0	4.0
ROOFING	2.0	2.5
STRUCTURAL	2.5	4.0
SPECIAL	.0	.0

ACTIVITY: NAVAL TRAINING CENTER SAN DIEGO, CA 92133 UIC: N00247

FACILITY NUMBER	TRANSACTION		ERROR MESSAGE	DATA REJECTED	
47	D4 CHANGE	M7801	UNMATCHED MASTER		ENTIRE ACTION REJECTED
	D4 CHANGE	S7801	UNMATCHED MASTER		ENTIRE ACTION REJECTED
	D4 CHANGE	S7802	UNMATCHED MASTER		ENTIRE ACTION REJECTED
194	D4 ADD	E8001	INV DEF ADD	(NO COST EST)	ENTIRE ACTION REJECTED
302	D3 CHANGE	E	INV INSP/RC	G	
316	D4 ADD	M8001	DUP DEF ADD	M8001	ENTIRE ACTION REJECTED
464	D4 CHANGE	S8001	UNMATCHED MASTER		ENTIRE ACTION REJECTED
477	D2 ADD		INV ADD NO D1-CC	D2	ENTIRE ACTION REJECTED
498	D3 ADD	M	INV ADD NO D1-CC	D3	ENTIRE ACTION REJECTED
PRKG	D1 ADD		INV LI		
	D3 ADD	S	INV ACT INSP HRS	048	

ACTIVITY: NAVAL TRAINING CENTER SAN DIEGO, CA 92133 UIC: N00247

FACILITY NUMBER	TRANSACTION		DATA TYPE	DATA ACCEPTED
1	D3 CHANGE	E	COND	F
			INSP/RC	Y
			ACT INSP DTE	0680
			ACT INSP HRS .	280
			DEFICIENCY?	Y
	D3 CHANGE	M	COND	P
			INSP/RC	Y
			ACT INSP DTE	0680
			ACT INSP HRS	280
			DEFICIENCY?	Y
	D3 CHANGE	R	COND	F
			INSP/RC	Y
			ACT INSP DTE	0680
			ACT INSP HRS	080
			DEFICIENCY?	Y
	D3 CHANGE	S	COND	P
			INSP/RC	Y
			ACT INSP DTE	0680
			ACT INSP HRS	320
			DEFICIENCY?	Y
	D4 CHANGE	E7801	DEF DESC	REPRS MISC
			COST EST	0003626
			DATE LAST FST	0680
	D4 ADD	E8001	DEFICIENCY ADDED	E8001
			DEF DESC	REPRS ELEC LTG
			COST EST	0004736
			DATE LAST FST	0680
	D4 CHANGE	M7801	DEF DESC	REPRS REPIPE DRAIN
			COST EST	0015808
			DATE LAST FST	0680
	D4 ADD	M8001	DEFICIENCY ADDED	M8001
			DEF DESC	REPRS SHT METAL
			COST EST	0004793
			DATE LAST FST	0680
	D4 ADD	M8002	DEFICIENCY ADDED	M8002
			DEF DESC	REPRS PLUMB MISC
			COST EST	0004924
			DATE LAST FST	0680
	D4 ADD	M8003	DEFICIENCY ADDED	M8003
			DEF DESC	REPRS REFRIG
			COST EST	0000610
			DATE LAST FST	0680

ACTIVITY: NAVAL SUPPLY CENTER SAN DIEGO, CA 92132 UIC: N00244CA CLASS: 2

FACILITY NUMBER: 238 FACILITY NAME: BATTERY CHARGING SHOP/NCA FACILITY TYPE: BUILDING CAT CODE: 21420 LI: A

MAP GRID	IRREGULAR	STORIES	ABMP CODE	LENGTH	WIDTH	HEIGHT	AREA/UM	OTHER/UM
D9	NO	1		100	61	16	6,100 SF	

DISCIPLINE	DATE INSP SCH	INSP FREQ	SR	CONDITION	FST INSP HRS	INSPECTED	REASON CODE	ACTUAL INSP DATE	ACTUAL INSP HRS	DEFICIENCY
STRUCTURAL	07/80	1		GOOD	2.0	...YES...NO	....	..../....	.....	...YES...NO

DEFICIENCY ITEM NUMBER	DESCRIPTION OF DEFICIENCY	COST ESTIMATE	FUND SOURCE	D C	D T	DATE OF LAST EST	DATE DEF 1ST RPTD	DATE LAST INSP	DATE DEF FUNDED
S7901	REPL RAFTERS	1,224	A			07/79	07/79	07/79	..../....

ACTIVITY: NAVAL SUPPLY CENTER SAN DIEGO, CA 92132 UIC: N00244CA

FACILITY NUMBER	FACILITY NAME	LI	DISCIPLINE	EST INSP HRS
116	GEN WHSE/ADMIN/NCA	A	ELECTRICAL	16.0
			MECHANICAL	10.0
			ROOFING	3.0
			STRUCTURAL	16.0
				45.0 TOTAL
238	BATTERY CHARGING SHOP/NCA	A	ELECTRICAL	2.0
			MECHANICAL	2.0
			ROOFING	1.0
			STRUCTURAL	2.0
				7.0 TOTAL
239	P W MAINTENANCE SHOP/NCA	A	ELECTRICAL	4.0
			MECHANICAL	2.0
			ROOFING	2.0
			STRUCTURAL	3.5
				11.5 TOTAL
298	VEH RDY FUEL STRG TNK/NCA	A	MECHANICAL	.5
				.5 TOTAL
299	VEH RDY FUEL STRG TNK/NCA	A	MECHANICAL	.5
				.5 TOTAL
300	GEN WHSE-BULK/NCA	A	MECHANICAL	.5
			ROOFING	.5
			STRUCTURAL	.5
				1.5 TOTAL
303	P W MMT STORAGE/NCA	A	ELECTRICAL	.5
			MECHANICAL	.5
			ROOFING	.5
			STRUCTURAL	1.0
				2.5 TOTAL
304	GEN WHSE RI/NCA	A	MECHANICAL	1.0
			ROOFING	1.0
			STRUCTURAL	2.0
				4.0 TOTAL
306	P W SHOP/NCA	A	ELECTRICAL	1.0
			MECHANICAL	1.0
			ROOFING	.5
			STRUCTURAL	2.5
				5.0 TOTAL

DISCIPLINE		INSPECTOR MONTH EQUIVALENTS
ELECTRICAL	(TOTAL)	4.7
	LI-A	4.6
	LI-B	.0
	LI-C	.1
MECHANICAL	(TOTAL)	5.4
	LI-A	5.3
	LI-B	.0
	LI-C	.1
ROOFING	(TOTAL)	2.4
	LI-A	2.3
	LI-B	.0
	LI-C	.1
STRUCTURAL	(TOTAL)	9.8
	LI-A	9.6
	LI-B	.0
	LI-C	.2
SPECIAL	(TOTAL)	.0
	LI-A	.0
	LI-B	.0
	LI-C	.0

ACTIVITY: NAVAL AIR STATION, NORTH ISLAND, SAN DIEGO, CA 92135 UIC: 00276

FACILITY NUMBER	DEFICIENCY ITEM NUMBER	DESCRIPTION OF DEFICIENCY	COST ESTIMATE	F S	PROJECT NUMBER	P C	D T	DATE OF 1ST REPD	DATE OF LAST EST	DATE DEF FUNDED
	A7903	REPR A/C PM	7,901	A		1	D	04/7[illegible]	08/79	
	M8001	REPR MECH MISC	9,600	A		1	D	02/80	02/80	
	R7801	REPR REROOF	63,800	A	R4378	2	N	04/7[illegible]	02/80	
	S7901	REPR/REPL WINDOWS	26,450	A		1	D	08/79	08/79	
	S7902	REPR PATCH PLASTER	5,266	A		1	D	08/79	08/79	
	S7903	REPR FLOOR TILE	442	A		1	D	08/79	08/79	
	S7904	MAINT PAINT INT PART	5,04	A		1	D	08/7[illegible]	08/79	
	S8001	MAINT PAINT EXT	33,900	A	R5378	2	D	02/8[illegible]	02/80	
259		NO DEFICIENCIES REPORTED								
263	**UNFUNDED**									
	E7801	REPR/REPL LTS/MISC	400	A		1	D	05/7[illegible]	05/78	
	M7901	REPR REPIPE BLDG	1,065	A		1	D	05/7[illegible]	08/79	
	R7801	REPR REROOF	1,139	A		1	N	05/7[illegible]	08/79	
	S7801	REPR REPL WINDOWS	1,916	A		1	D	05/7[illegible]	08/79	
	S7802	MAINT PAINT EXT	1,040	A		1	D	05/7[illegible]	08/79	
265	**UNFUNDED**									
	R8001	REPR ROOF	65,300	A	R5673	2	D	02/8[illegible]	02/80	
270	**UNFUNDED**									
	E7801	REPR INSTL CIR PNLS/LITIX	27,210	A		1	L	05/7[illegible]	08/79	
	M7801	REPR REPL PIPE/LADDERS	4,626	A		1	D	05/7[illegible]	08/79	
	R7801	REPR REROOF	21,000	A		1	N	05/7[illegible]	02/80	
	S7801	REPR SIDING/GLASS	1,032	A		1	D	05/7[illegible]	08/79	
	S7802	MAINT PAINT EXT	26,736	A		1	D	05/7[illegible]	08/79	
271	**UNFUNDED**									
	E7801	REPR/INSTL ELEC PNLS/LI	26,748	A		1	D	05/7[illegible]	08/79	
	M7801	REPR REPL LADDERS/PIPES	5,701	A		1	D	05/7[illegible]	08/79	
	R7901	REPR REROOF	21,000	A		1	N	05/7[illegible]	02/80	
	S7802	MAINT PAINT EXT	26,730	A		1	D	05/7[illegible]	08/79	
	S7901	REPR MISC	2,830	A		1	D	08/79	08/79	
272	**UNFUNDED**									
	E7801	REPR/INSTL ELECT PANELS	26,466	A		1	D	05/7[illegible]	08/79	
	M7801	REPR REPL LADDERS/REPIPE	5,713	A		1	D	05/7[illegible]	08/79	

ACTIVITY: NAVAL STATION SAN DIEGO, CA 92136 UIC: N00245

FACILITY NUMBER: 57 FACILITY NAME: ENL MENS BARRACKS W/O MESS FACILITY TYPE: BUILDING CAT CODE: 72111 LI: A

MAP GRID	IRREGULAR	STORIES	ARMP CODE	LENGTH	WIDTH	HEIGHT	AREA / UM	OTHER / UM
F4	YES	2		385	248	36	92359 SF	

DISCIPLINE: ELECTRICAL DATE INSP SCH: 11/80 INSP FREQ: 1 SR: 00 CONDITION: FAIR EST INSP HOURS: 16.0

DISCIPLINE: MECHANICAL DATE INSP SCH: 11/80 INSP FREQ: 1 SR: 00 CONDITION: FAIR EST INSP HOURS: 2.0

DISCIPLINE: ROOFING DATE INSP SCH: 11/80 INSP FREQ: 1 SR: 00 CONDITION: FAIR EST INSP HOURS: 4.0

DISCIPLINE: STRUCTURAL DATE INSP SCH: 11/80 INSP FREQ: 1 SR: 00 CONDITION: FAIR EST INSP HOURS: 8.0

ACTIVITY: NAVAL STATION SAN DIEGO, CA 92136 UIC: N00245

FACILITY NUMBER: 58 FACILITY NAME: FM SRS AMT BRIG FACILITY TYPE: BUILDING CAT CODE: 73015 LI: A

MAP GRID	IRREGULAR	STORIES	ARMP CODE	LENGTH	WIDTH	HEIGHT	AREA / UM	OTHER / UM
D4	YES	2		185	152	31	4897 SF	

DISCIPLINE: ELECTRICAL DATE INSP SCH: 02/81 INSP FREQ: 1 SR: 00 CONDITION: FAIR EST INSP HOURS: 8.0

DISCIPLINE: MECHANICAL DATE INSP SCH: 02/81 INSP FREQ: 1 SR: 00 CONDITION: POOR EST INSP HOURS: 6.0

DISCIPLINE: ROOFING DATE INSP SCH: 02/81 INSP FREQ: 1 SR: 00 CONDITION: FAIR EST INSP HOURS: 2.0

DISCIPLINE: STRUCTURAL DATE INSP SCH: 02/81 INSP FREQ: 1 SR: 00 CONDITION: FAIR EST INSP HOURS: 4.0

INSPECTOR MONTHS (INSPECTION COUNT)

		JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
UIC SUMMARY													
DISP	E		.2(20)	.1(14)	1.8(278)	.2(5)	.2(13)	2.2(187)	5.4(504)	2.5(343)	2.4(172)	3.4(259)	1.4(131)
	M		.2(18)	.3(19)	1.8(273)	.0(5)	.2(13)	2.8(264)	6.5(514)	3.7(351)	2.2(174)	4.4(286)	2.0(133)
	R		.2(17)	.1(16)	1.1(242)		.0(5)	1.0(203)	3.6(463)	1.2(237)	1.0(136)	1.5(223)	.7(124)
	S		.3(25)	.6(22)	3.1(296)	.1(5)	1.7(22)	4.0(290)	10.6(563)	5.3(374)	3.9(203)	7.9(365)	2.2(144)
	X		.0(1)						1.5(36)	.1(1)		.1(2)	.0(1)

UIC	NUMBER OF FACILITIES	NUMBER FACILITIES SCHEDULED	NUMBER FACILITIES INSPECTED
00244	1	1	1
00245	19	19	
00246	17	12	10
00247	10	10	8
60259	30		
62021	7	7	
63387	26	22	1
65888	6	1	
66001	13	12	2
68056	1		
TOTAL	130	84	22

1.ACTIVITY 2.POINT OF CONTACT 4.UIC

NAVY PUBLIC WORKS CENTER SAN DIEGO, CA 92136 NAME AUTOVON NUMBER 63387

5. DEF. ITEM NO.	6. DEFICIENCY DESCRIPTION	FACILITY DATA 7.FAC. NO.	8.CAT CODE	9.COST ACC.	10. IC	11. FS	DEF.DATA 12.DC	13.DT	14.CURRENT COST ESTIMATE	15. PROJECT NUMBER	16. MAJOR CLAIMANT USE
S8001	MAINT PAINT EXT	304	A1209	7710	17	K	1	D	423		
E8001	REPRS ELECT MISC	310	17120	7110	05	K	1	D	379		
M8001	REPRS PLUMB MISC	310	17120	7110	05	K	1	D	328		
R8001	REPRS ROOFING	310	17120	7110	05	K	1	N	592		
S8001	REPRS STRUCT MISC	310	17120	7110	05	K	1	D	1,932		
S8002	MAINT PNT EXT	310	17120	7110	05	K	1	D	1,270		
M8001	REPRS MECH MISC	400	A1310	7710	17	K	1	D	274		
S7901	MAINT PAINT EXT	400	A1310	7710	17	K	1	D	503		
S8001	REPRS STRUCT MISC	400	A1310	7710	17	K	1	D	253		
E8001	REPRS ELECT MISC	1004	21910	7120	08	K	1	D	615		
M7901	REPRS DFLFTF,SERVICE	1004	21910	7120	08	K	1	D	970		
S7901	REPRS STRUCT MISC	1004	21910	7120	08	K	1	D	1,136		
E8001	REPRS ELECT SYS U/P	1011A1	A1320	7710	17	D	2	D	347,600	P087	
E8002	REPRS ELECT SYS U/P	1011D1	A1320	7710	17	D	2	D	347,600	P-87	
E8003	REPRS ELECT SYS U/P	1011E2	A1320	7710	17	D	2	D	347,600	P087	
E8004	REPRS ELECT SYS U/P	1011F2	A1320	7710	17	D	2	D	347,600	P087	
E8005	REPRS ELECT SYS U/P	10111A	A1320	7710	17	D	2	D	347,600	P087	
M8001	REPR HTW BOILERS FY81	1024P1	A2210	7720	17	K	2	N	139,700	R1481	
M8002	REPRS HTW LINES FY82	1024P1	A2210	7720	17	K	2	N	400,000	R1782	
M8003	REPR SUMP PUMPS FY83	1024P1	A2210	7720	17	K	2	D	80,000		
M8001	REPR SEWER SYS FY82	1025T2	A3210	7760	17	K	1	N	100,000	R882	
E8001	REPRS INCAND LTS	0107	21910	7120	08	K	1	D	1,143		
E8002	REPRS ELECT MISC	0107	21910	7120	08	K	1	D	607		
M8001	REPRS MECH MISC	0107	21910	7120	08	K	1	D	1,314		
S8001	REPRS FLOOR TILE	0107	21910	7120	08	K	1	D	517		

REPORT 8053A TYPE "A" ANNUAL INSPECTION SUMMARY - TRANSMITTAL

1.FROM	2.UIC	3.PERIOD ENDING	4.POINT OF CONTACT	5.AUTOVON NUMBER:
NAVY PUBLIC WORKS CENTER SAN DIEGO, CA 92136	63387	30 SEP 1981		

6.TO	7.VIA	8.COPY OR COPIES TO
COMNAVFACENGCOM		

STATEMENT OF COMMANDING OFFICER OR OFFICER-IN-CHARGE

ALL INSPECTED REAL PROPERTY IS IN SATISFACTORY CONDITION WITH THE EXCEPTION OF THE MAINTENANCE AND REPAIR DEFICIENCIES LISTED ON OPNAV 10010/8. I JUDGE THOSE DEFICIENCIES DESIGNATED NONDEFERRABLE IN NATURE TO MEET THE NMAR CRITERIA DEFINED IN OPNAVINST 11010.34 (CURRENT).

9.SIGNATURE OF COMMANDING OFFICER OR OFFICER-IN-CHARGE 10.DATE SIGNED

PUBLIC WORKS CENTER SAN DIEGO 11.INSPECTED BY

12. 000530 = NUMBER OF INSPECTIONS RECOMMENDED FOR COMPLETION BY NAVFAC MO-322

13. 000000 = NUMBER OF INSPECTIONS PERFORMED

14. 0.0% = PERCENTAGE (13 12)X 100= %

UIC	MAJOR CLAIMANT
N00244	COMNAVSUPSYSCOM
N00245	CINCPACFLT
N00246	CINCPACFLT
N00247	CNET
N00948	CNET
N60259	COMNAVAIRPAC
N61665	CNET
N62021	CINCPACFLT
N62106	RESHED19
N62474	NAVFAC
N62791	COMNAVSEASYSCOM
N63387	COMNAVFACENGCOM
N63406	CINCPACFLT
N65584	COMNAVELECSYSCOM
N65888	NAVAVNLOGCEN
N65918	CINCPACFLT
N66001	CHNAVMAT
N68056	BUMED
N70240	COMNAVTELCOM

NUMBER OF INPUT CARDS 19 NUMBER OF UICS 19

REPORT BD59A TYPE "A" ANNUAL INSPECTION SUMMARY - NARRATIVE ASSESSMENT

1.ACTIVITY	2.FUND SOURCE	3.DATE	4.IC
NAVAL TRAINING CENTER SAN DIEGO, CA 92133	06MN (1804)	SEP 30 1981	15 TROOP HOUSING/MESSING

5.NON-DEFERRABLE LAST YEAR	6.DEFERRABLE LAST YEAR	7.FUNDING LAST YEAR	8.NON-DEFERRABLE THIS YEAR	9.DEFERRABLE THIS YEAR
			84	

10.CONDITION

11.SPECIFIC MISSION IMPACT

12.CLAIMANT OBJECTIVE

REPORT 8D59 TYPE "A" ANNUAL INSPECTION SUMMARY - COST ACCOUNT SUMMARY DATE 81-04-01

1.MAJOR CLAIMANT/ACTIVITY

NAVAL TRAINING CENTER SAN DIEGO, CA 92133

2.FUND SOURCE

O&MN (1804)

3.SHEET

001

4. IC.	5. COST ACC	6. COST ACCOUNT DESCRIPTION	*** NON-DEFERRABLE *** 7. DEFICIENCY CODE 1	8. DEFICIENCY CODE 2	*** DEFERRABLE *** 9. DEFICIENCY CODE 1	10. DEFICIENCY CODE 2	*** TOTAL AIS *** 11. DEFICIENCY CODE 1	12. DEFICIENCY CODE 2
14	7160		6				6	
ST 14			6				6	
15	7170		84				84	
ST 15			84				84	
16	71J0		5				5	
ST 16			5				5	
17	76F0		24				24	
ST 17			24				24	
TOTAL			119				119	

ACTIVITY: NAVAL STATION San DIEGO, CA 92136 UIC: N00245

SPECIAL AREA	FACILITY NUMBER	DEFICIENCY ITEM NUMBER	DESCRIPTION OF DEFICIENCY	COST ESTIMATE	DATE DEF 1ST REPD	DATE OF LAST EST	DATE DEF FUNDED
BC	1Z	R7901	REPRS REROOF	1,072	03/79	03/79	04/80
BC	1Z	S7902	MAINT PNT EXT	560	03/79	03/79	04/80
CA	2A	S7901	PAINT EXT	434	04/79	04/79	04/80
CA	3A	E7901	MISC REPRS	839	04/79	04/79	04/80
CA	105	S7901	PAINT EXT	2,536	04/79	04/79	04/80
QA	106	E7901	MISC REPRS	336	04/79	04/79	04/80
QA	106	S7901	PAINT TOP	1,260	01/79	01/79	04/80
QA	106	S7902	SANDBLAST & COAT INSIDE	9,498	01/79	01/79	04/80
CA	110	E7901	MISC REPRS	300	04/79	04/79	04/80
QA	123	S7901	PAINT BAYES	256	04/79	04/79	04/80
QA	126	R7901	REROOF	544	04/79	04/79	04/80
QA	16A	E7901	MISC REPRS	295	04/79	04/79	04/80
QA	16A	E7901	MISC REPRS	260	04/79	04/79	04/80
QA	16A	S7901	FLOOR TILE	388	04/79	04/79	04/80
QA	16A	S7902	PAINT PART INT	1,364	04/79	04/79	04/80
QA	102A	E7901	MISC REPRS	375	04/79	04/79	04/80
QA	128A	E7901	MISC REPRS	484	04/79	04/79	04/80
QA	128A	S7901	PART PAINT	390	04/79	04/79	04/80

TOTAL ESTIMATED COST 9,034,540

REFERENCES

1. "Base Engineering Support, Technical", March 19, 1984, Department of the Navy, Naval Facilities Engineering Command, Alexandria, Virginia.

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